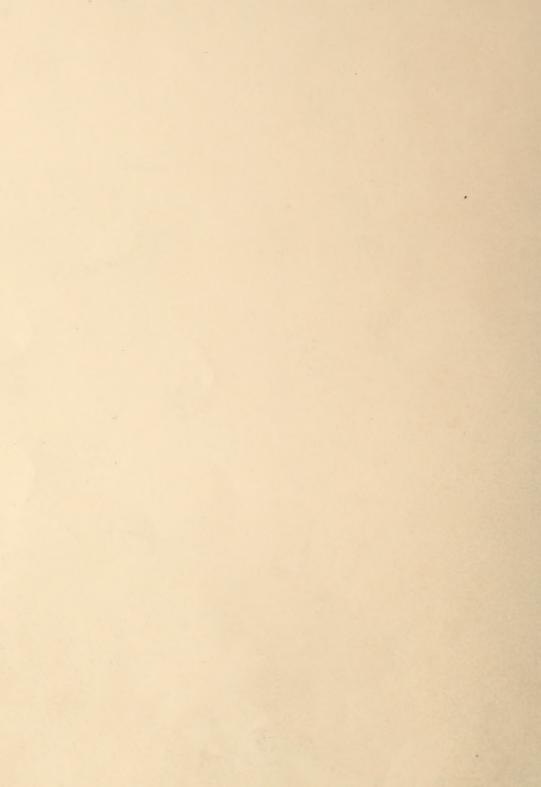
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Do not assume content reflects current scientific knowledge, policies, or practices.



STARK FRUITS:

As Grown by the

STARK BRO'S NURSERIES C

PROPRIETORS of the

STARK NURSERIES.

LOUISIANA, MO., ROCKPORT, ILL., U. S. A.

1.000 acres Nurseries. 40,000 acres Orchards.

FOUNDED 1825

STABLE FRUIT

CODYRIGHT, 1896, BY STARK BRO'S.

this book are covered by Copyright and nurserymen, dealers and others everywhere are Cautioned against using same, either wholly or in part.



Important

MY DEAR SIR: I beg to assure you that each particular one of the varieties herein has been selected according to the best judgment and knowledge I possess, and in the light of the accumulated experience of three generations of fruit growers and nurserymen. I earnestly believe the sorts recommended in this book are of the best known to modern Horticulture. Faithfully yours,

STARK BRO'S N. & O. Co.

Our Salesmen are sent out to sell Stark Fruits by samples, thereby often saving our customers expensive and weary trips to the Nurseries, or their time, trouble and expense of making out and sending off their own orders and getting same in small lots. By filling a large number of orders, shipping in carload lots, etc., we can deliver, freight and all charges paid, even a small order for less than the freight alone would often be, if ordered by itself.

No. 7658 , Series M

this Sample Book with care—it is expensive. Do not mark prices on the plates. Carry it in a special inner pocket. Avoid getting it wet or soiled. By erasing finger marks each week with rubber, the plates can be kept neat and clean.



The horticultural **Triumph of the Ages.** The marvelous product of crossing two widely differing races of plums, the Japan and Native American. Not only vastly better than the parent races, but far superior to **any** plum of **any** race hitherto known. In short, to quote the great Burbank, "Among plums there is **NOTHING ON EARTH AS BEAUTIFUL OR GOOD."**

STARK BRO'S NURSERIES



The OLD BLUE-BACK **SPELLER**

was erstwhile thumbed by how many who read these words!
And the old familiar picture!—
each heart recalls a different scene, but all remember well how, cribbed cabined and con-fined while sunshiny afternoons the feeling akin to pity grew into real admiration for the "young sauce-box" who would not come down, either for words or grass.—It TAKES stones and bull-dogs to make boys come down out of STARK Trees! LOUISIANA, MO. ROCKPORT. ILL.

TELL YOUR FRIEND we want more Salesmen and Club-Makers

everywhere to take orders—STARK trees almost sell themselves! Cash pay weekly

No experience necessary We'll teach-he'll succeed.

ÄXXXXXXXXXXXXXX

—not leaves only. Tested 70 Years. When you plant a Stark tree, you can depend upon it—you have the best there is. This Trade-Mark, on all Stark trees, adds nothing to their

rice; but it *does add* to your safety against bogus stuff.

STARK trees are never sold by tree dealers. Buy direct or

STARK TRADE MARK 11 11011 of authorized Salesmen—with our certificate, attested by Notary.
You can't afford to take chances. No man wants to lay the ax to the root of a tree, or dig it up, just when old enough to bear.—A Tree is Known by its fruit. Stark trees bear fruit—the finest science has ever produced. For instance:

Some golden globes—nothing on earth as beautiful or good." No marvel, ten, that sweet glad to pay full \$3,000.00 FOR A SINGLE TREE.

GOLD is controlled by us under Patented Trade-Mark-NOT GROWN OR SOLD BY OTHERS.



Earliest of All and Red June are the hardiest in bud and bloom; bore full when Abundance, etc., were killed. Follows strawberries and 10 days earlier than Red June; half as large, solid dark red, good quality, free stone. Drops easily but don't rot and is very profitable—shake the fruit on sheets and market in quart berry boxes. Tree dwarfish.

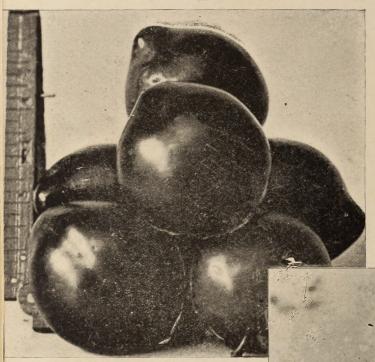


RED JUNE, Emperor of Japan Damson, two weeks earlier than Abundance, hardy in bud and bloom; loaded down with magnificent plums in '95 when Abundance, etc., were all killed. Ripe June 28, here in N. E. Mo.; ready to ship some days earlier; colors a solid red, even if picked when just turning, hence outsells Abundance, and all partly colored sorts. Doesn't drop; juicy, good, a delicious canning plum, with finest Damson flavor.

Red June Trees planted Spring '94, yielded June '95, the second year, over a gallon per tree of large, fine, well ripened plums.

QUESTION.—Is it better to plant Gold and Japan plums, that BEAR IN ONE OR TWO YEARS, or European sorts, such as Prunes, Gages, and others, that don't bear for 6 or 8 years? If you plant for profit, figure a little.



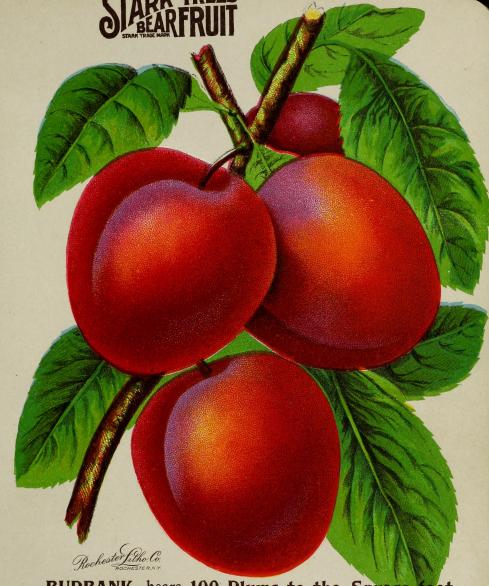


RED JUNE JAPAN PLUM .-- Tree and Fruit.

DOAK PROCESS WHOLE ROOT TREES

STARK TREES STARK TREES START TRACK MARK FRUIT

RED JUNE PLUMS Make Boys Mouths Water.



BURBANK, bears 100 Plums to the Square foot. Superior every way, to Abundance, Berckmans (Botan), and all the older Japs—except Red June. Strong, hardy, long lived tree; great bearer, even at 2-yrs. Next in value after GOLD (which we believe the most valuable plum in cultivation), comes the Japs; many tested are worthless, some are good, 5 are grand—named in order of value, numbered in order of ripening: RED JUNE (1), WICKSON (5), NORMAND (3), BURBANK (4), ORIENT (6), ABUNDANCE (2). Other Japs 2d Choice, or discarded.

Red June, hardiest in bud, surest bearer, freest from rot, most profitable, beautiful and Grandest Jap yet fully tested. The only Jap that has given us FIVE SUCCESSIVE CROPS. Last two years have raised Red June 100 per cent. in our estimation.

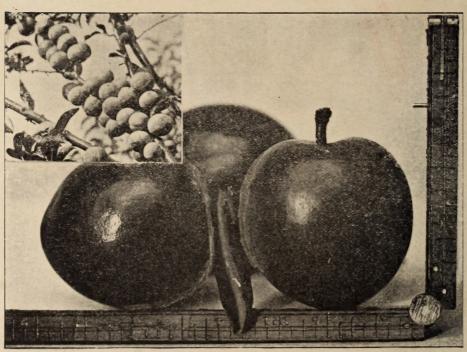
Wickson (Perfection), solid red color like Red June; largest plum we have ever seen. New, and we have only fruited it one year; may yet prove, as Mr. Burbank says, "best of all Japs."

Normand, JAPAN YELLOW GAGE, very fine and largesize of Red June apple. Golden yellow, high quality, freestone. Bears early and well.

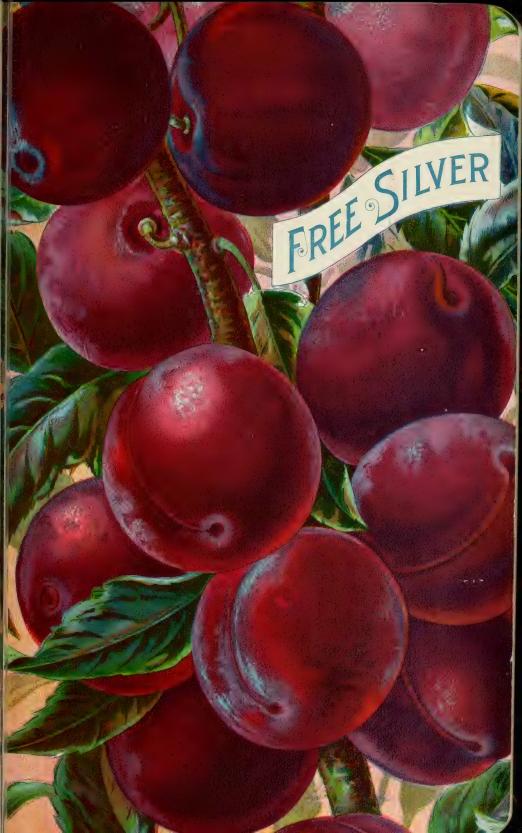
Orient, a late bloomer and the next surest bearer after Red June.—Large; yellow and deep red. Excellent quality and a long keeper.

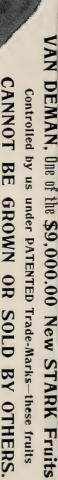
Abundance is good, but not quite hardy enough in tree, bud nor blossom; is subject to to fruit-rot, and lacks color to sell well in market.





ORIENT, JAPAN PLUMS, and section of tree.





This photo shows a "medium or a little LESS than medium sized VAN DEMAN quince and an AVERAGE Meech Prolific, BOTH GROWN UNDER EXACTLY SAME CONDITIONS."—L. Burbank.

VAN DEMAN, the GIANT Quince

Strong Grower, Earliest and Hardiest of all. "Will, without doubt, PRODUCE MORE BIG, FINE-FLAVORED GOLDEN FRUIT than any other. Bears THREE CROPS; the first ripens TWO WEEKS OR MORE before Orange or Meech, often weighing, even when grown on small trees, 25 to 26 ounces—over FIVE INCHES IN DIAMETER. All are of MOST SUPERIOR FLAVOR, TEXTURE AND QUALITY, are tender and good BAKED, and bake quickly too. When DRIED OR CANNED, retain all the quince flavor so much admired. Opens a new field. "Growing, side by side, Orange, Rea Mammoth, Meech, Champion and others, but not one of them has ever borne any fruit at all comparable with Van Deman in SIZE, QUALITY, FLAVOR OR BEAUTY."

Meech Prolific

Meech Prolific

Meech is an early and abundant bearer and the fruit of very large size, beautiful appearance and delicious flavor. After some years' test alongside of Rea Mammoth, Orange, Champion, etc., we find it SUPERIOR to them all. Second only to Van Deman—but Van Deman is simply UNEQUALLED UNAPPROACHED



This magnificent new \$3000.00 prune is a scientific cross between Petite (French) and Hungarian (Pond's). "Trees are perfection in growth and productiveness, and though having somewhat the general appearance of Petite, yet the branches are more sturdy and with very little pruning, naturally assume a uniform appearance, much superior to either parent. As a combined drying, shipping, market and table plum it has no rival. A darker, richer violet purple than French, but has the same firm, rich, sugary flesh, ripens two weeks earlier, and being three or four times larger and a perfect freestone, will perhaps supplant that grand, long-known and extensively grown variety, and change the whole prune industry of the world."—So writes the great Burbank; and later adds:

"I am much more convinced than ever of Splendor's superlative value, owing to incomparable firmness, beauty, productiveness, size, EXQUISITE QUALITY, early ripening, hardiness and vigor of tree, and because of wonderful keeping qualities and being perfectly freestone. More than TWO WEEKS EARLIER than French prune

— a very important matter. A stupendous bearer and has NO FAULTS."

Gold is a plum to plant everywhere, Splendor only where German and other prunes, Lombard, Damsons, etc., succeed.



SPLENDOR, one of the \$9,000.00 New STARK Fruits,

Controlled by us under PATENTED Trade-Marks—these fruits CANNOT BE GROWN OR SOLD BY OTHERS.



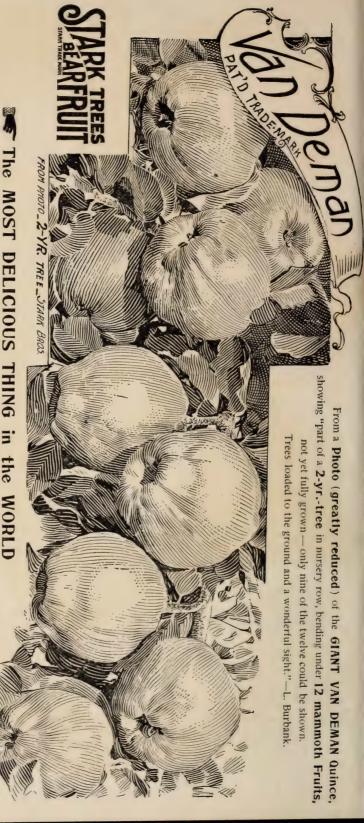
SPLENDOR (\$3,000.00) Prune and French Prune—from Photo. "Both grown under exactly the same conditions."

GOLD is a plum to plant EVERYWHERE, SPLENDOR ONLY where German Prune and other prunes, Lombard, Damsons, etc., succeed.

"Splendor is a scientific cross. As a combined DRYING, SHIPPING, MARKET AND TABLE PLUM it has no rival. Color darker and richer than French, but has the SAME FIRM, RICH, SUGARY FLESH, ripens TWO WEEKS EARLIER, and being THREE OR FOUR TIMES LARGER and a perfect natural FREESTONE, will perhaps supplant that grand, long-known and extensively grown variety, and CHANGE THE WHOLE PRUNE INDUSTRY OF THE WORLD."—So writes the great Burbank; and later adds:

"I am much more convinced than ever of Splendor's superlative value, owing to incomparable firmness, beauty, productiveness, size, EXQUISITE QUALITY, early ripening, hardiness and vigor of tree, and because of wouderful keeping qualities and being perfectly freestone. More than TWO WEEKS EARLIER than French prune—a very important matter. A stupendous bearer and has NO FAULTS.'





is Van Deman Quince Syrup. Far surpasses the purest Maple Syrup ever Take 1 part Van Deman quinces, 3 parts apples. If JELLY is desired, simply cook down a little more.

enough Van Deman fruit can be had—no other sort has so exquisite a flavor. For hot cakes, &c., EITHER the Syrup or Jelly will be a revelation to you—we know for we've tested it. It's a **Great Food Product** for high-class trade, and will be advertised and put on the market, as soon as

Come in on the GROUND FLOOR—we have already planted over 3000 Van Deman trees, intend to plant many more. A Long-Keeper and the fruit can be shipped like apples to the SYRUP FACTORIES The Earliest Quince by TWO WEEKS; Hardiest and a remarkably Strong Grower.

Large, Delicious fruit of Incomparable Flavor and Great Reauty



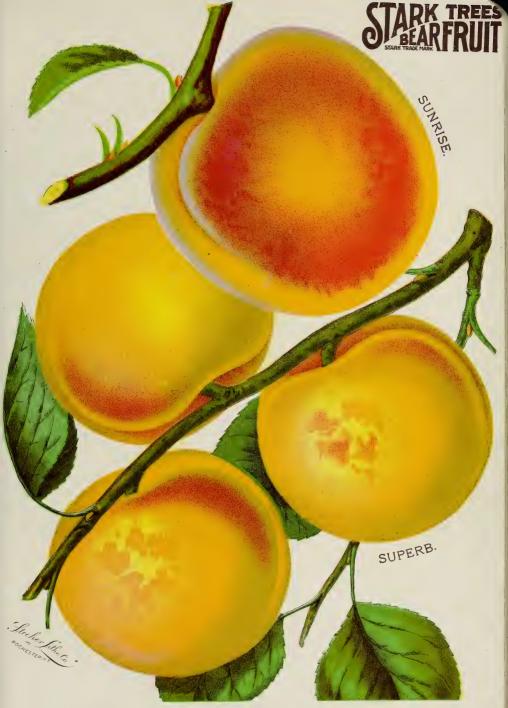
FLORENCE, Finest Crab Ever Fruited

"WORTH ALL OTHERS PUT TOGETHER." Early, large, beautiful, best quality; the youngest bearer, most prolific, most profitable of all. The best crab to plant in small space—6 ft. square is ample.





STARK TREE



SUNRISE,, a hardy seedling in the orchard of our neighbor, R. K. Smith, proves our earliest and largest hardy apricot. Has borne SIX SUCCESSIVE CROPS, two of them while a large peach orchard adjoining did not bear a peach. Sunrise is not equal in quality to Superb—neither is any other apricot—but is larger. Alex., Budd and many other Russian apricots now discarded.

SUPERB, a hardy seedling, from Lawrence, Ks., where we saw it 2 yrs in full fruit. "Has produced more fruit, of larger size, and better—most superb—quality, than any other, native or foreign. Better and more constant bearer than any hundred others. Exhibited at the Nurserymen's Convention, where its exquisite quality, in comparison with others, was conceded by all. Superb, raising the average in size and quality of this excellent fruit, is worthy of extensive cultivation. Some Eastern firms would make fortunes out of it."



ORIENT Japan Plum. "A Wonder to Bear."

OLD OAK PROCESS WHOLE ROOT TREES



SUDA, from Stark Denver Orchards.





DYEHOUSE, Best Early Cherry

Earlier, larger, firmer, better quality, and pit smaller than Early Richmond—equally hardy and productive.

These five cherries—Dyehouse, Abbesse, Montmorency O. (best of all), German Ostheimer, and Suda Hardy—cover the entire season, the best out of over 200 sorts we have tested. With this "Big 5" we don't need any others.



STARK TREES BEARFRUIT STARK GREEN GAGE.

OLD DAK PROCESS

HOLF ROOT TREES



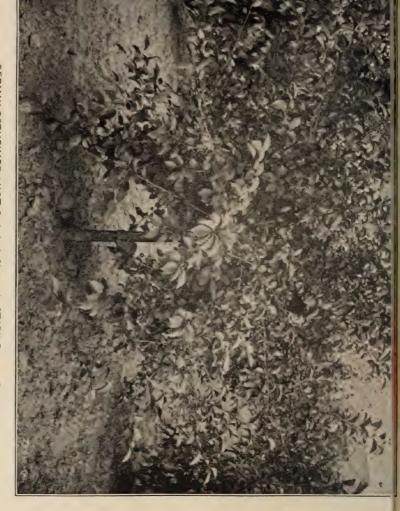




MONT. O., KING CHERRY

A mortgage lifter. The only fruit crop that has absolutely never failed. Plant a 1,000—best canner and all-purpose cherry and outcrops them all. Grand every way. Tree HALF DWARF. Cannot be too highly recommended for its never-failing heavy crops of fine fruit, and beauty and hardiness of tree. We pick cherries with scissors—far better and 3 times faster.





GERMAN OSTHEIMER (NOT Ostheim) Cherry, in STARK Denver Orchards.

A 3-YR. tree—its SECOND Crop.



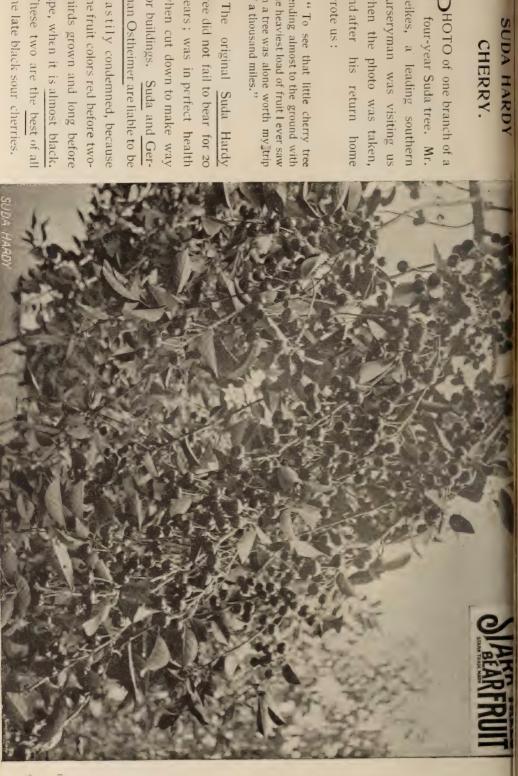


SUDA HARDY CHERRY.

and after his return home nurseryman was visiting us wrote us: when the photo was taken, Heikes, a leading southern HOTO of one branch of a four-year Suda tree. Mr.

on a tree was alone worth mylltrip of a thousand miles." the heaviest load of fruit lever saw bending almost to the ground with To see that little cherry tree

when cut down to make way the late black sour cherries ripe, when it is almost black. thirds grown and long before the fruit colors red before twohastily condemned, because man Ostheimer are liable to be for buildings. Suda and Geryears; was in perfect health tree did not fail to bear for 20 These two are the best of al



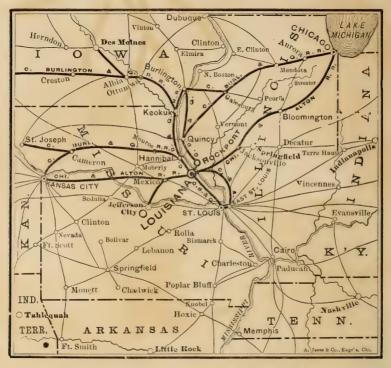


"HANDSOME, MELTING, SWEET, PLEASANT, VERY GOOD, ELLWANGER & BARRY.
"IT HAS COME TO STAY, HON HE VAN DEMAN, "ONE OF THE BEST, IF NOT THE BEST OF ITS SEASON! PREST, T.T. LYON
"GOOD, HANDSOME, PLEASANT," JOHN J. THOMAS, "DELICIOUS, WORTHY OF TRIAL RURAL NEW YORKER.
"BEST QUALITY OF EARLY PEARS, EARLIEST GOOD PEAR, BEST KEEPING EARLY PEAR".

YOUNG TREES HAVE OFTEN MADE SEVEN FEET GROWTH IN FIVE MONTHS.

STARK BRO'S NURSERIES @

LOUISIANA and the "BIG 3" Cities.



Louisiana, Mo., Rockport, Ill., on the Upper Mississippi River, between the Grand Cities, Chicago, St. Louis and Kansas City, with **two Great Competing R. R.'s** to each.





TYSON, Summer Seckel, is Fine, hardy, long lived, exempt from blight—26-year-old standard trees have never failed a crop since bearing age. FRUITS are Profit, Luxury, Health, Contentment, Purity, Refinement.



DE SOTO PLUM.

SUDA HARDY (3 yr.; Second Crop.)

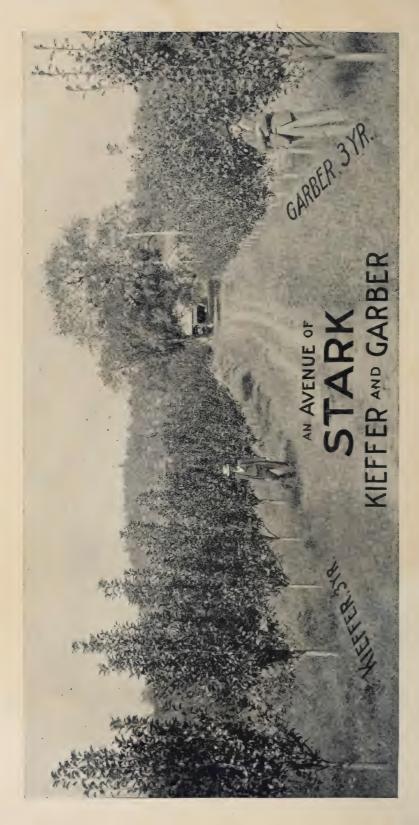
STARK TREES BEARFRUIT OLD OAK PROCESS
WHOLE ROOT TREES



BOUSSOCK BEST, our favorite OLD STANDBY. Bears full every year—NO FAILURES.

"May to a great extent supersede Bartlett; fully equal in quality, ripens about a week earlier."—Mo. Hort. Soc.

"The market pear of the Belgium farmer, large, productive, showy, and well known in the English market. Thousands of baskets of it are frequently seen on the London steamers' wharf at Antwerp."—Pres. Berckmans.





GARBER, King of Hybrid Pears. Large as Kieffer, better in quality, two months earlier. SURE BEARER. Sold for \$4 a bushel when other pears brought only \$2. Also plant Garber and Kieffer for Avenue Trees—see photo. SECKEL, small but of highest flavor. Healthy, long-lived. HOWELL, one of the finest American pears. Sweet, melting.



L UISE BONNIE JERSEY



STARK TREES

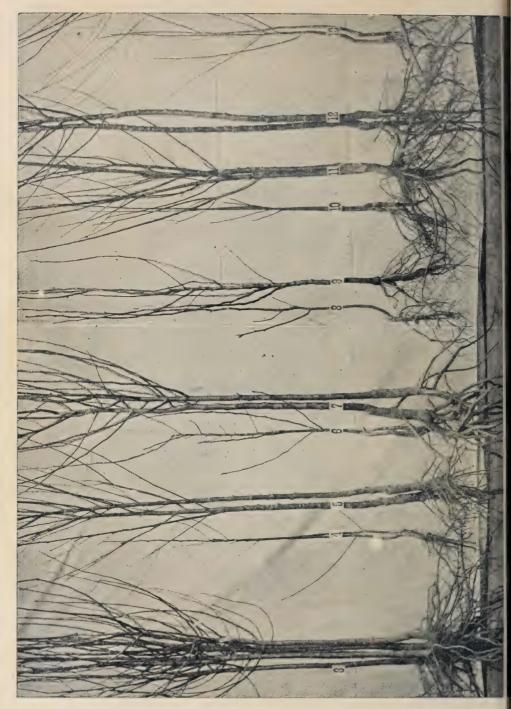
OLD OAK PROCESS

WHOLE ROOT TREES



as a dwarf. Frequently bears the first season after planting.

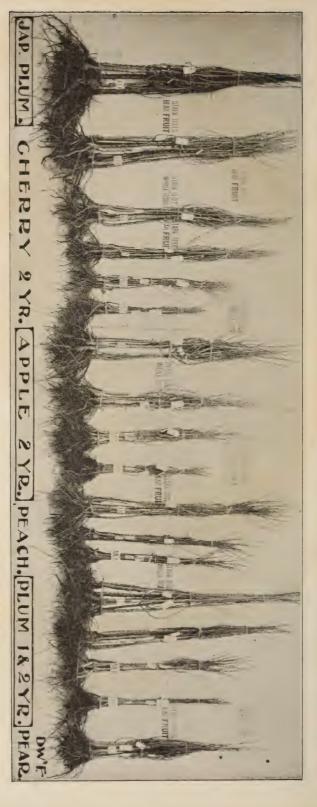
A Profitable Pear Orchard.—U. S. Pomologist Heiges: "The pear orchard of C. S. Mills, near South Haven, Mich., was the finest that ever came under my observation. Trees 8 years old, mostly Duchesse dwarf, and in 1893 the entire crop averaged \$5 per barrel in Chicago; in 1894, the crop was simply enormous."



BARGAIN SIZE AND X X

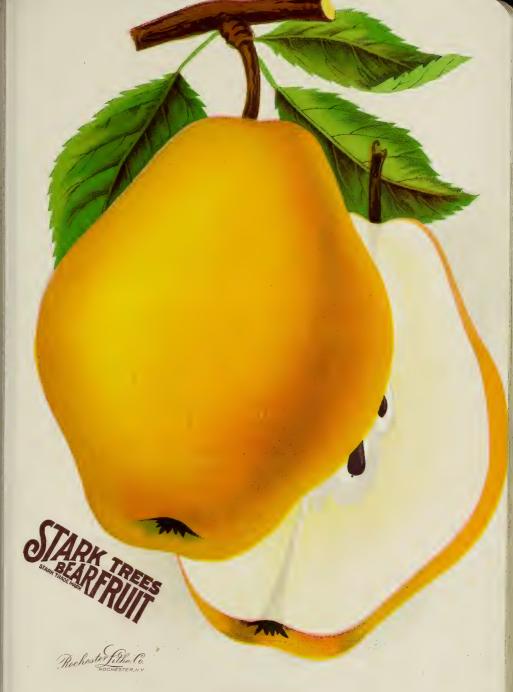






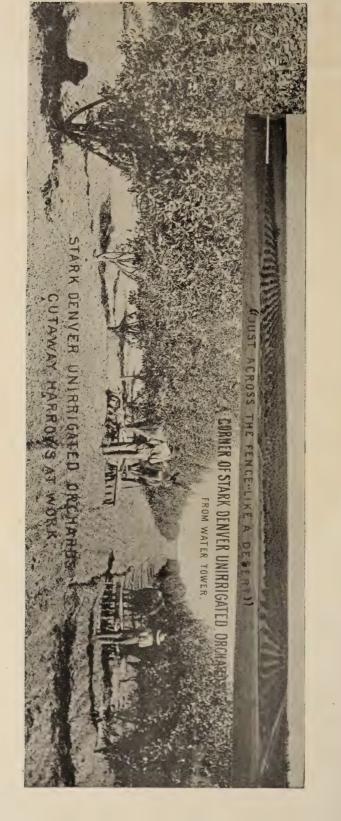
STARK TRUES

DID DAK PROCESS



KIEFFER

Very **profitable.** Excellent for canning, but should not be used until weeks after gathered. Its wonderful fruitfulness is surprising; 4-yr. trees have yielded 3 bushels each of perfect fruit. Keeps easily until mid-winter.

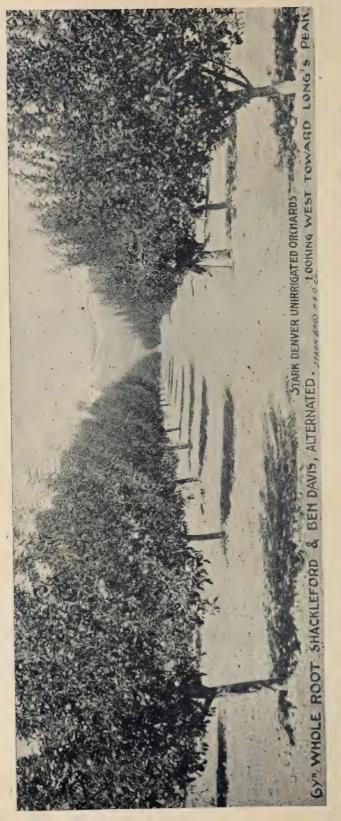




A native Missouri seedling. Keeps till April in barrels just like apples. Lemon yellow, with a delicate bloom, giving it a rich appearance; skin thick and strong. Flesh firm until fully ripe, when it becomes juicy, melting, rich and sweet. Old trees, of immense size—nearly two feet in diameter—are still healthy, free from blight, and productive; some seasons bear 25 bushels each.

"The best winter pear I have seen; surpasses Lawrence in quality and coloring, and is a very late keeper."—U. S. Pomologist Van Deman.

The best time is during dry weather and sunshine. A north wind makes it so much the better, as it closes the pores of the fruit. Fall sorts should be picked shortly before ripe—when seeds are brown, or when the stem parts easily—but winter fruit should hang on the trees as long as possible.

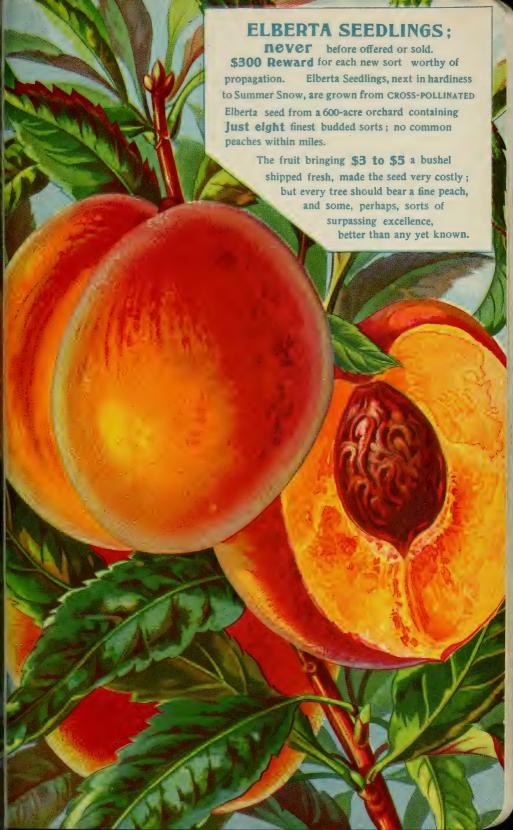


STARK TREES

OLD OAK PROCES









STARK DENVER ORCHARDS, AT 4 YEARS, Looking North towards Denver, Distant 7 Miles.

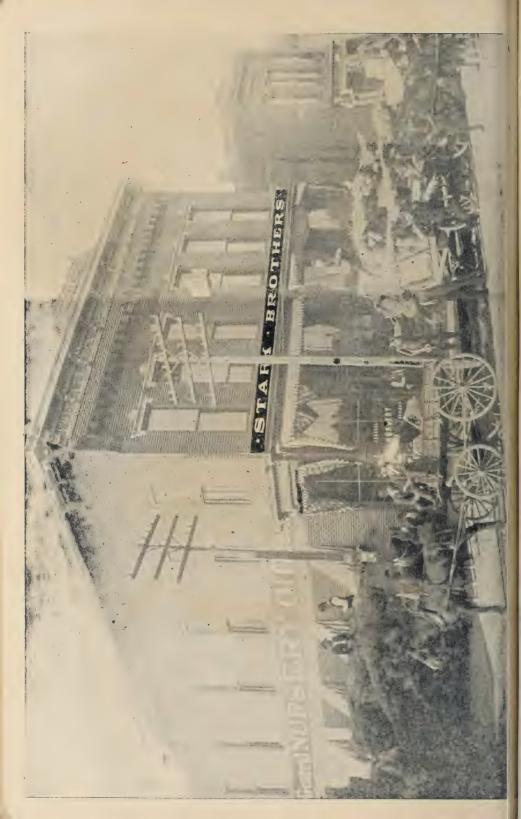


CROSBY SEEDLINGS, Hardiest of All,

and often bear the 2ND YEAR. Next hardiest, Summer Snow, always TRUE from seed. Next, Elberta Seedlings. These 3 grand SEEDLING peaches will bear further north than any budded peach known. Seed from same 600-acre orchard as Elberta Seedlings; and we offer a similar \$300 Reward, etc.

SELECT SEEDLINGS—Grown from seed of such selected fine peaches as reproduce with slight variations. In hardiness, they average next to Elberta Seedlings, and should bring many good kinds. \$100 Reward for each worthy new sort.

Pres't T. T. Lyon: "In my neighborhood in Mich., a grower has for years planted seedling peach orchards from selected seed and he now has some thousands of trees and the peaches pass readily among experts as that of budded trees."





Ten to 15 days earlier than Alexander; is not of same type, but of the valuable Chinese Cling family, to which belongs so many of the finest peaches—Elberta, Belle of Ga., etc.,—hence freer from rot. Being the first peach, it has always sold at high prices, \$4 to \$8 a bushel.

"Earliest Peach Known." Exceptionally desirable. Recently brought to notice, but has been grown for some years in localities, and its merits as a money maker fully established. Will be a most extensively planted new sort.



TRIUMPH; bears young, yields immense crops.

LO DAK PROCESS
LO DAK PROCESS

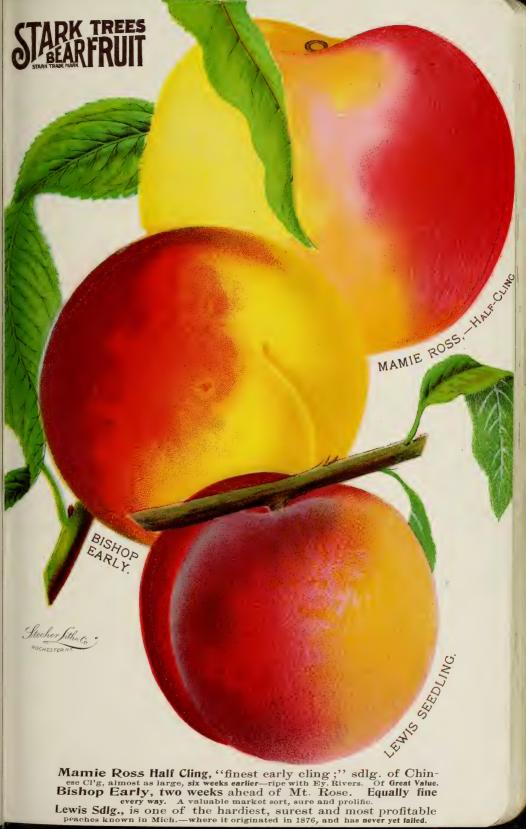
STARK FRUIT

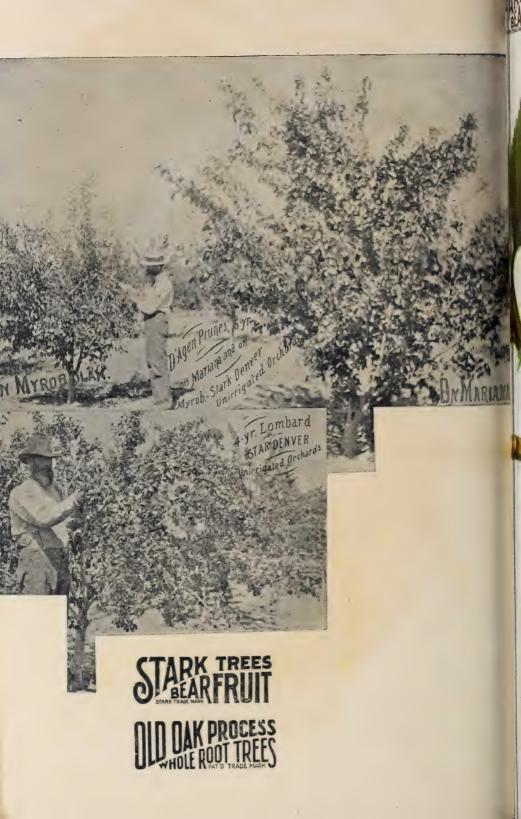


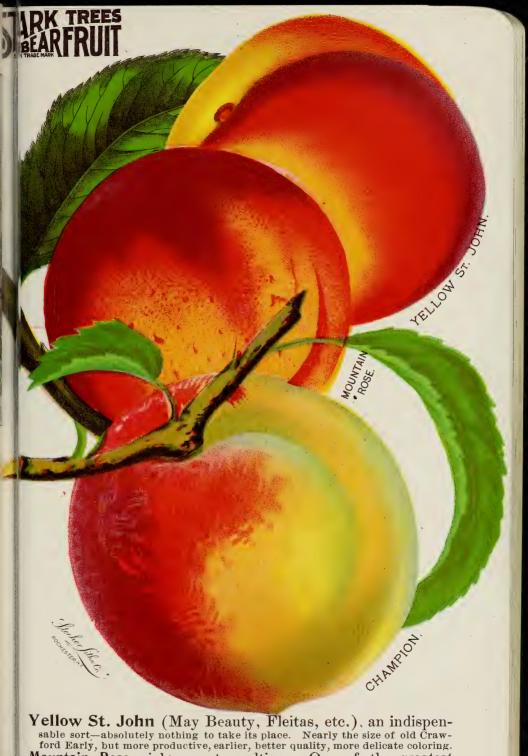
STARK TREES STARKFRUIT



OLD DAK PROCESS







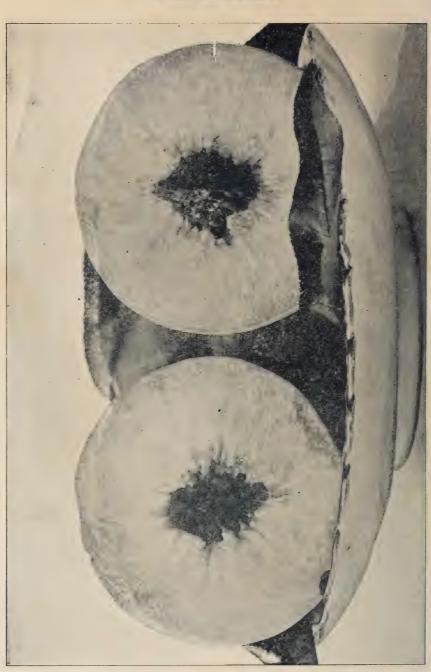
Mountain Rose, rich, sweet, melting. One of the greatest favorites. Excellent for both home and market Champion ripens with Large Early York (Honest John), but it is much larger and far more valuable because hardy and a surer bearer. Size, quality, etc., much like Oldmixon.





Mountain Rose, rich, sweet, melting. One of the greatest favorites. Excellent for both home and market Champion ripens with Large Early York (Honest John), but it is much larger and far more valuable because hardy and a surer bearer. Size, quality, etc., much like Oldmixon.

STARK TREES BEARFRUIT



OLD OAK PROCESS
HOLE ROOT TREES

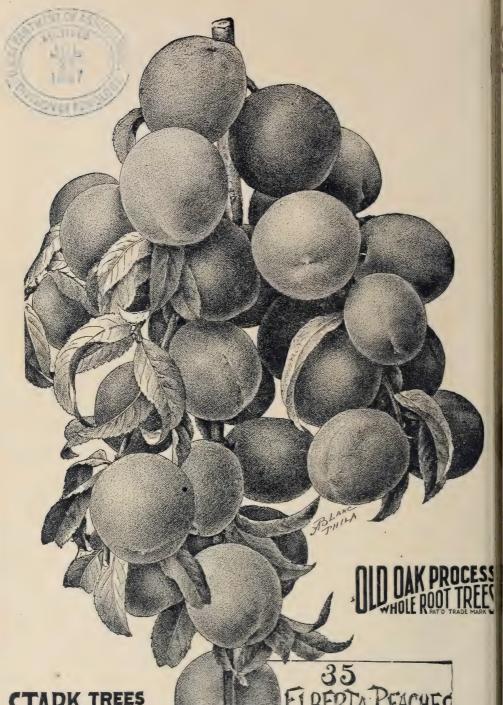
WASHINGTON (Future Great.)



Belle of Georgia, a grand market peach, second only to Elberta—these two stand first in the N. Y. market for quality and price. A grower from Arizona saw Belle of Ga. growing and saw the market returns, then wanted 100,000 trees. Decidedly a finer peach than Family Favorite, Thurber or Chinese Free—the red is redder, the white whiter.

Crawford Early Improved (true Mary Choice) is of same season, but surpasses Crawford Early, Reeves Favorite and others of the Crawford E'y family in quality, hardiness and full-bearing.

Washington, Future Great, the Best of peaches; our favorite for high quality. Not sweet like Summer Snow, but exceedingly rich, juicy, vinous and luscious. Bears very full yet is very large; has proven one of the best paying peaches. Very small seed.



ELBERTA PEACHES



OLDMIXON FREE IMPROVED (Mountain Rare-ripe)—Like Oldmixon every way, but larger, higher color, more productive and brings 25 per cent more money.

ELBERTA grows in popularity as the years roll by; **no other peach** ever made an equal record. Most desirable of all yellow flesh sorts. Large, golden yellow, with red cheek—high color, one of the darkest of all; juicy and high flavor.



The late WM. STARK at the age of 27.—From a daguerreotype taken in 1853.

"THE TOUCH OF A VANISHED HAND."

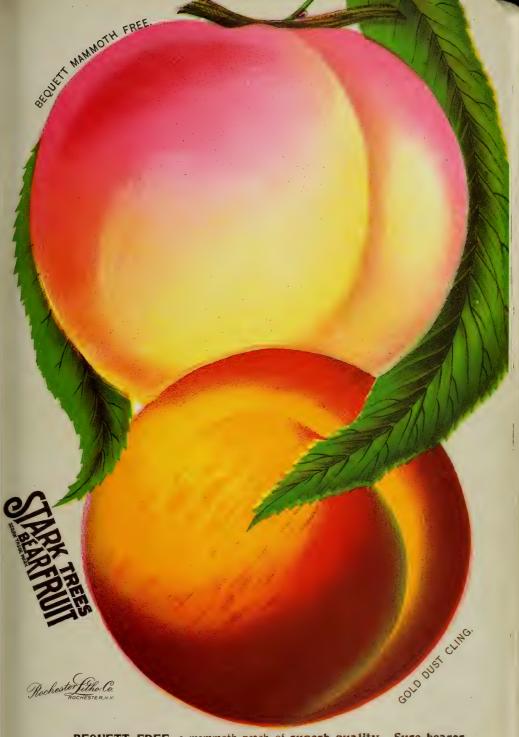
To the good judgment and wisdom of our honored and lamented father, the late Wm. Stark (dec'd 1880), more than to all others, is due the success of these Nurseries. The broad and sure foundation long ago laid, was chiefly of his building, he having succeeded his father while yet but a mere boy of 14 years. For more than 40 years he successfully labored to advance Horticulture in this, his native State. His cherished wish was to place his sons in the business he had always loved;—we are glad his wish that we should be nurserymen has been fulfilled, if not exactly in the way he had planned. First came the panic of '73—and misfortune. Then too much he indulged his fond pursuit, and in his almost successful efforts to dispel the clouds that lowered upon our house, sacrificed first health, then life itself.—

"Oh what a noble heart was here undone, When Science's self destroyed her favorite son."

We cannot hope to render any adequate tribute to his revered memory—we do what we can. Perhaps we cannot say anything so well or that would be half so expressive as the brief tribute paid by the friend who had known him long and well—Pres't J. C. Evans: "William Stark was one of the best men I ever knew."

As to the dark times—not one of us now regrets or undervalues the experiences through which we have passed; for only too well we know how precious "a jewel the ugly toad, adversity, wears."

The treatises by William Stark, published in Mo. State Hort. Reports, 1867 to 1878, and elsewhere, have not yet lost their force. Nor will they. For the principles advocated are not for a day, nor an age, but for all time.



BEQUETT FREE, a mammoth peach of superb quality. Sure bearer, even at Springfield, Ill., where most sorts fail; highly recommended there by Benj. Buckman, as "a fine peach for home or market." Mr. Ross, of Ill., in '95, netted \$10 each from 10 Bequett trees; people there wild for more trees.

S. W. Gilbert, Mo.: "When I wanted a delicious dish of peaches and cream, or a fine one to eat, I invariably took a Bequett. The juciest freestone I ever saw and one of my very best shippers."

GOLD DUST, "Best cling peach I've ever seen," says Pres. Evans. "Finest canning peach I ever saw," says S. W. Gilbert. Grown largely for market, by Olden Fruit Co. and others. Dark red cheek; unusual fine quality."

STARK TREES STARK TREES



JUNE ROOT TREES

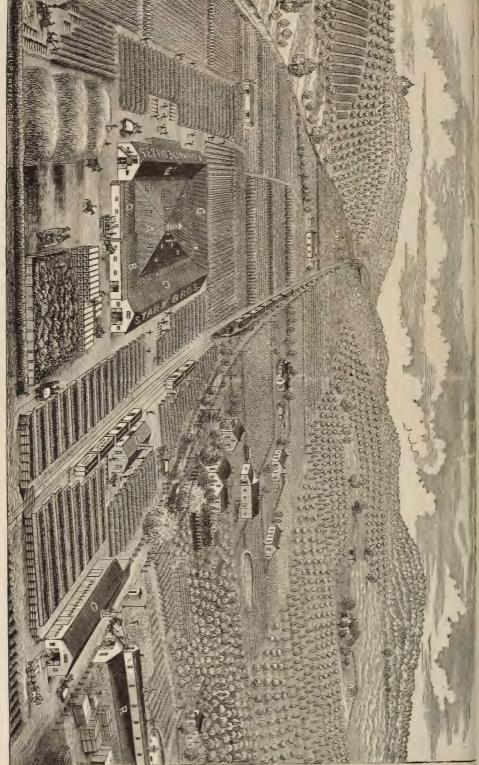


CRAWFORD LATE IMPROVED (Chairs Choice)—C. Late, Prize, Brandywine, Globe, Chairs Choice, etc., ARE ALL SIMILAR, but Chairs is a few days later, hardler and a better bearer; is taking the lead of every known variety of the Crawford Late family. Away AHEAD OF GLOBE in all respects.

POOLE FAVORITE resembles Crawford Lt. but larger, richer color, better bearer and ten days later. A. W. Poole, the great Ark. orchardist, has 7,000 trees and says it is his great money maker, excelling Elberta. He adds:

"The best peach in Arkansaw. Don't rot and the peaches color on the under branches almost as well as in the sun. Average 3½ in. diameter. If I can only get another variety equal in value, and two weeks earlier, I don't want anything better."

6ROWN BY NO OTHER NURSERY; our stock is direct from Mr. Poole's bearing trees.



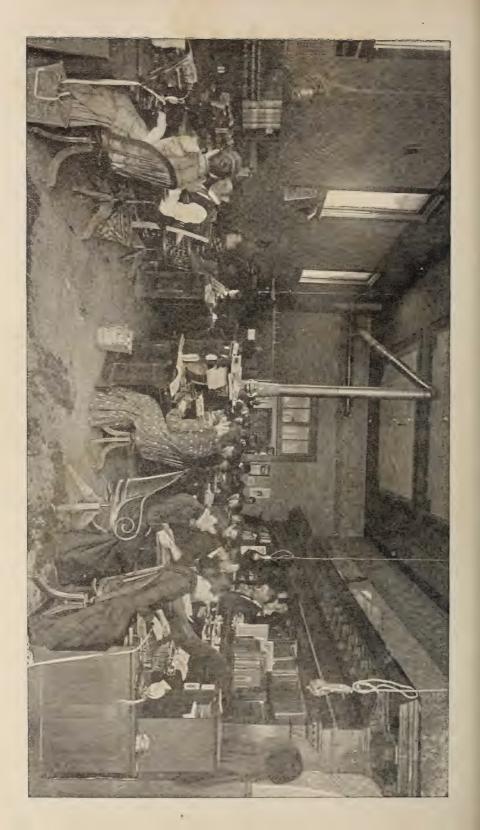
PART OF STARK PACKING HOUSES AND HOME GROUNDS.



PICQUET LATE, after **26 years** test proves the most profitable late yellow peach. Superior to Salway. Strong grower, sure heavy bearer. Rich, sweet, high flavor.

MAMMOTH HEATH CLING, the largest and most superb of the entire Heath cling family. Tender, melting, exceedingly juicy, with a rich, high, most luscious flavor.

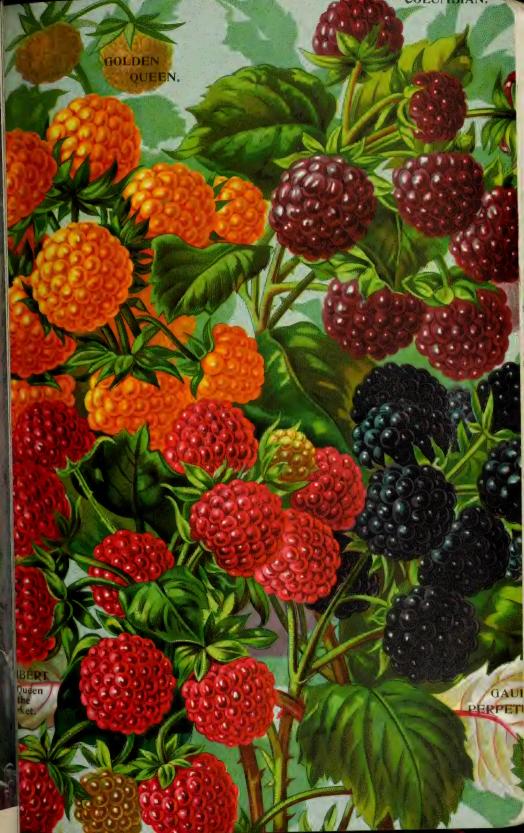
J. W. Kerr, the great peach authority, says: "Am growing Mammoth Heath in preference to Wilkins, Ringgold, etc., because it excels in size and in smooth clean surface."





and are not hardy enough. Downing and Smith lack vigor and fruitfulness, but Houghton is a standby—among gooseberries like Concord among grapes."—Gardening.





OUR PECOS VALLEY ORCHARDS

Our business as nurserymen and orchardists brings us into close touch and acquaintance with the various regions, not only in the U. S. but throughout the world, where the fruits of the temperate zones are grown. As nurserymen we produce millions of trees for tree planters everywhere, and as orchardists we have planted orchards in many widely separated fruit growing sections. Our orchards aggregate some millions of trees, covering many thousands of acres, giving us doubtless many times over the

largest orchard interests in the world. The bulk of these orchards is in the newer central fruit growing States, largely in Missouri and Illinois, with many in more than twenty-four other States. But with these several thousand orchard farms, we still felt the need of finding a more perfect region, especially adapted to growing keeping apples, a region where we could secure early bearing annual crops with no off years, and approximate perfection in size, color, quality. Another requirement was a locality where facilities were good for supplying the export trade, by way of the Gulf ports, of South American countries and Europe, also the home trade of the South. With Pres't Earle we studied the problem. We concluded we would find the longlooked-for land in the Valley of the Pecos. So we went forth to spy out this promised land. The sequel is told in the following from the Denver Times-Sun, Aug. 23, '94:

COLORADO SPRINGS, Colo.—(Special.)—There was organized here yesterday a company,

the operations of which are destined to have a most important bearing upon the Pecos valley of New Mexico, in which several of our prominent capitalists are largely interested. The name of the organization is the Pecos Valley Orchard Co., and its object is ultimately to establish in the Pecos valley the largest apple orchard in the world. Board of Directors: Clarence M. Stark, Wm. P. Stark, Parker Earle, Jas. J. Hagerman, Geo. R. Buckman, Arthur S. Goetz and Herbert Hagerman. Beginning with a capital of \$200,000 for the first 2000 acres, the expectation is to increase yearly at this rate or even faster until 10,000 acres or more shall have been planted.

This enterprise is the outcome of a recent visit to the valley of Mr. Parker Earle and the Stark Bro's, gentlemen of national reputation in horticultural and pomological matters. Mr. Earle is to-day the most widely known horticulturist in the U.S. He is president of the Am.

Hort. Soc., having held that position since the society's organization in 1880.

The firm of Stark Bro's, with headquarters at Louisiana, Mo., was established in 1825. As the result of three generations of successful endeavor, they now rank among the foremost nurserymen and fruit growers of the United States, while their fruit nursery is the largest in the world.

Parker Earle Knows Trees—and he has planted more than 70,000 Stark trees the last 14 months.—Pres't Parker Earle, Roswell, N. M., Nov. '94, writes as follows: Trees unloaded, planting begun. They are a splendid lot.

Later, May, '95: Our trees are doing finely. Lost a good many of the small size; never want any more small trees for planting here. But we have the most valuable orchard in the world growing right here. I wish you could see how well the trees look. You "boys" need fear no competition—your trees are ABSOLUTELY BEST.

Later, June, '95: As to orchard growing here, (1) It is by far the most difficult place to make trees live and grow well the FIRST year. (2) After that there is less trouble, annoyance, uncertainty, here than any other place, and much surer returns. This is a very valuable orchard, more so by far than any other in the world. It is worth a million dollars if properly cared for.

Later, Nov., '95: We are planting the last car load of trees. They are elegant.

Later, June 1, '96: E. O. Faulkner, Vice Pres. and Gen. Mgr.: Have just visited the P. V. O. Co. orchards. They are in excellent shape and receiving fine cultivation. Pay us a visit. I realize that you have large interests here now which I trust will be larger in future.



Parker Bros., Wholesale Fruits, Chicago: Our Southern Mo. orchard, 40,000 trees, for which you furnished the stock, is in fine shape. All treesliving. Williamson & Mather, Lawrence Co., Mo., write us: Trees arrived in perfect order. Rec'd the Highest Praise. Prople all around are enthused. Later: We take special pleasure in writing you that our 16,300 Stark O. O. P. Whole Root trees are EVERY ONE GROWING.





PAY.DAY SCENE AT THE "HOME NURSERIES"-300 MEN IN LINE.

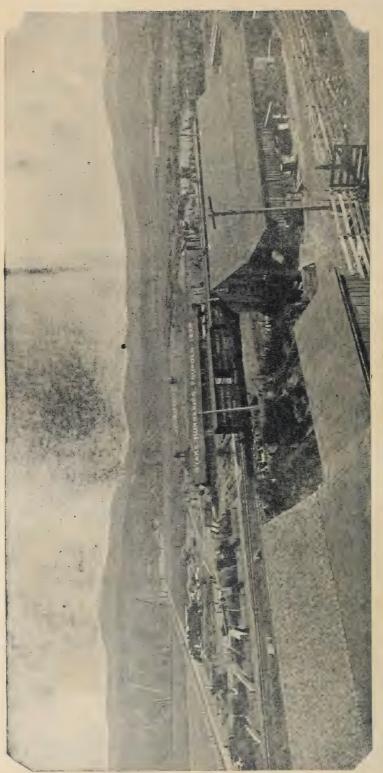


Early King, our favorite blackberry. Perfection in quality; large, hardy prolific. People won't even look at Early Harvest if we have Early Kings in same load.

"Finest blackberry I have yet seen."—Prof. G. H. French, Ill. Exp. Station.

Early Harvest, fairly hardy, exceedingly productive. Valuable for market, fair for home use.

Snyder, extremely hardy. Wonderfully prolific. Sweet, juicy, good quality, and without core when fully ripe.

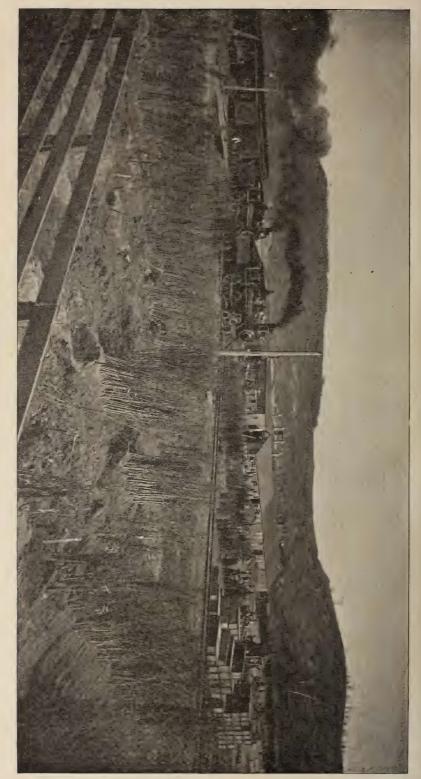


PART OF PACKING HOUSES.

OL OAK PROCES







PACKING GROUND VIEW—Instantaneous Photo.



NIAGARA

Not of finest quality like Diamond, nor nearly so early and nardy; yet Niagara is so far the most popular white grape. Productive, profitable for market; good shipper and keeper. Best red grape. Rich, sweet, highest quality—every grape a bears well, but only when planted near Diamond, Worty—every grape a Ripens early and den, or other sorts for cross-

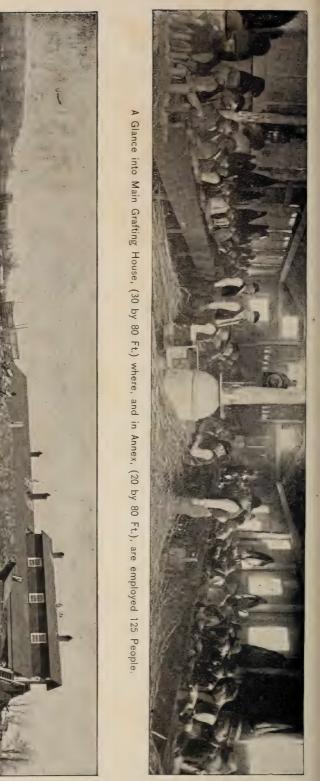
bag of juice.

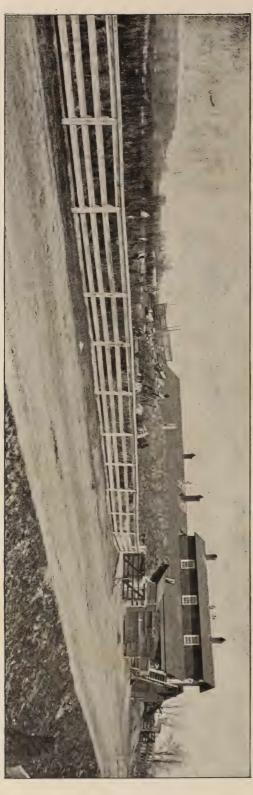
pollination

Does well everywhere, but is

giving way to Worden, its finest seedling.

WORDEN is the KING
Black Grape. Larger than
Concord, a week earlier better quality, enormous bearer.



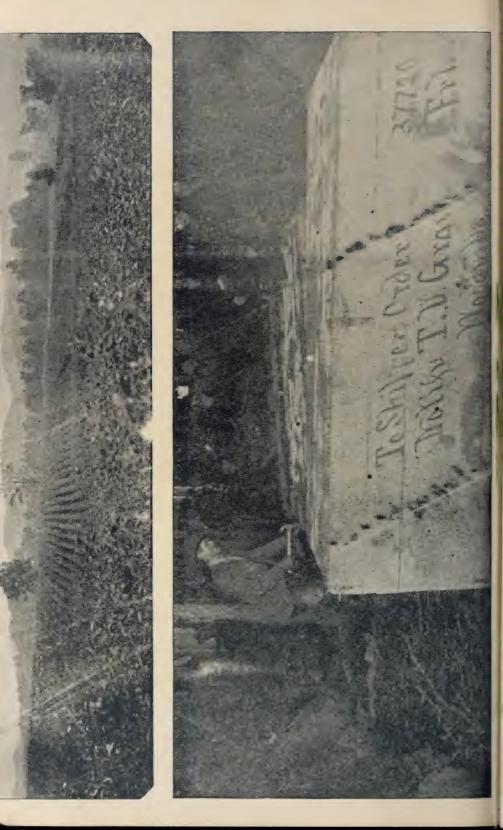


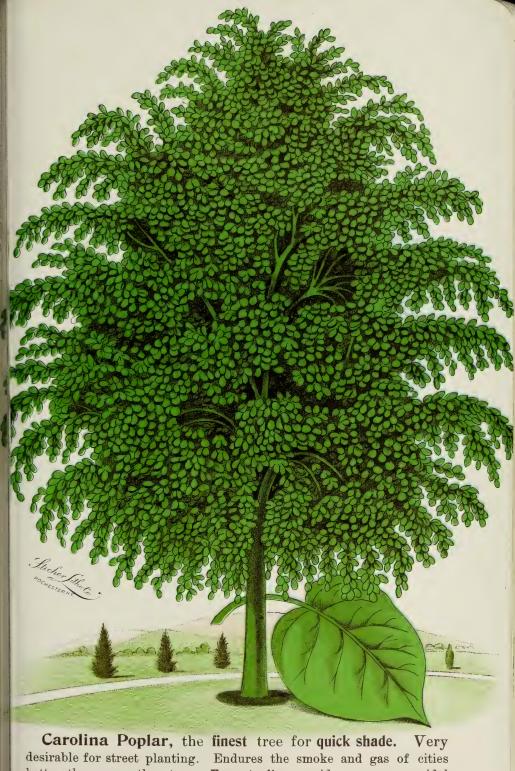


Blooms in April, long before roses, and every branch is thickly set with the delicate pink flowers, resembling small roses.

"A Conspicuous Object in early spring when crowded with beautiful blossoms.

"A Conspicuous Object in early spring when crowded with beautiful blossoms. Has special value for small grounds; should be brought to the front."—Mo. Hort. Soc.





desirable for street planting. Endures the smoke and gas of cities better than any other tree. Easy to live, rapid grower, pyramidal form, perfectly hardy and healthy, not troubled with insects; large, handsome glossy leaves. Does not sucker or lift up the pavement.

The Tree for Everybody.

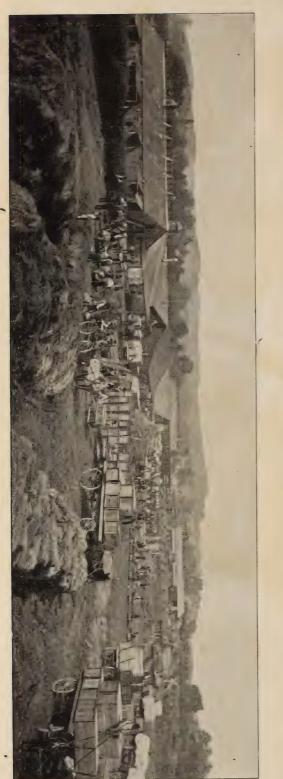


Packing Houses, etc., looking South-Eastward.



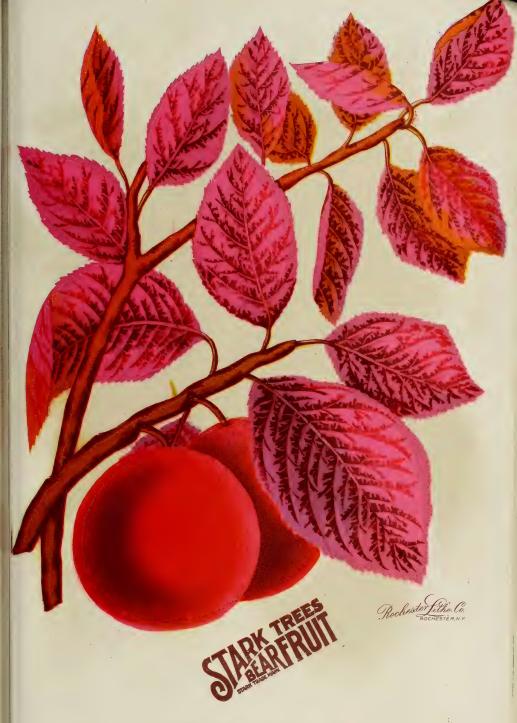
DOUBLE—resemble DELICATE PINK ROSES.

A new and rare ornamental tree of great beauty and merit —HARDY as an oak, as are the common wild crab apples, and of wide adaptability to various soils. Does not bloom until leaves are fully developed which adds greatly to its beauty.



One of our Rockport blocks showing a section of Mile-long rows of 1-yr. trees.





CRIMSON-LEAF PLUM

Finest of all red or purple-leaved trees; leaves hold their bright crimson red color all season long. Has lovely white flowers, and bears a very good plum—which is also bright crimson from the time it is formed, until ripe.



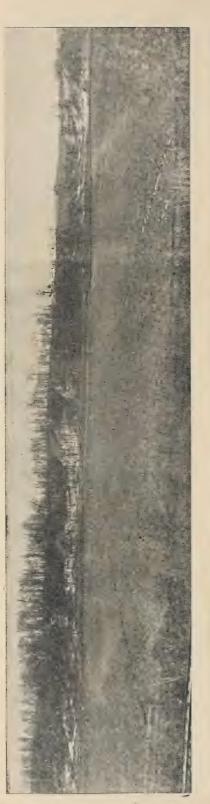
Digging Whole Root and piece root 2-yr. Ben Davis, grown side by side with the same culture; the 2 tree-diggers, 4 mules to each, have easy work on pc-rts. The 3rd digger with 6 finest Missouri mules, finds it "hard sleddin'" on Wh. Rt. trees.

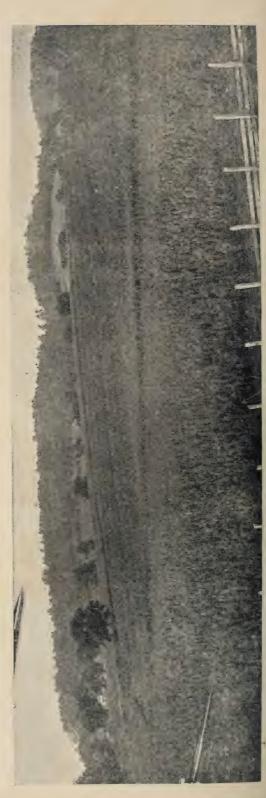
(In the extreme distance at right center is where, in 1816, the late Judge Stark, then a young man fresh from "Old Hickory's" New Orleans campaign, laid the foundation of these Nurseries.)



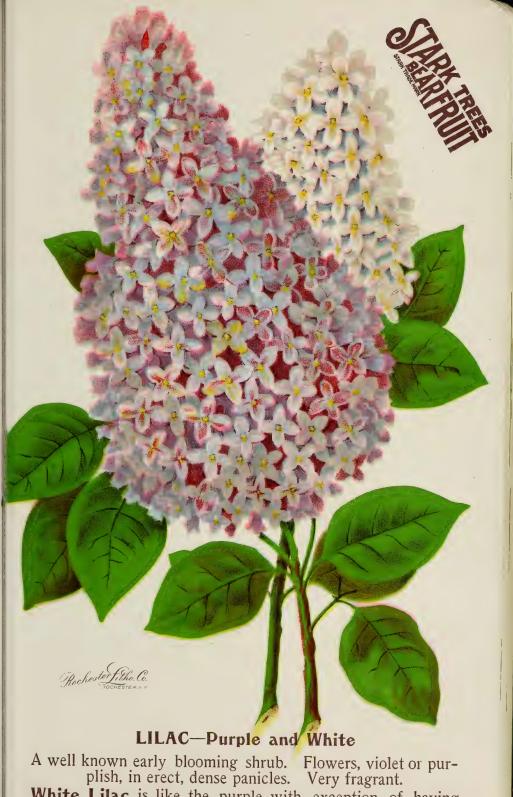
Spirea Van Houttei, the finest and most showy of all Spireas, and one of the hardiest and very best flowering shrubs. Entirely "at home" everywhere, even on the bleakest western prairies. We cannot say too much for it—must be seen in full flower to appreciate its wondrous beauty. Somewhat like Bridal Wreath, but far better than that old beauty.

An upright grower, with long, slender branches, which droop gracefully with their weight of foliage and flowers. Flowers pure white, in great clusters, forming cylindrical plumes, two to three feet long. When in full bloom, a "perfect snow-bank or fountain of flowers."

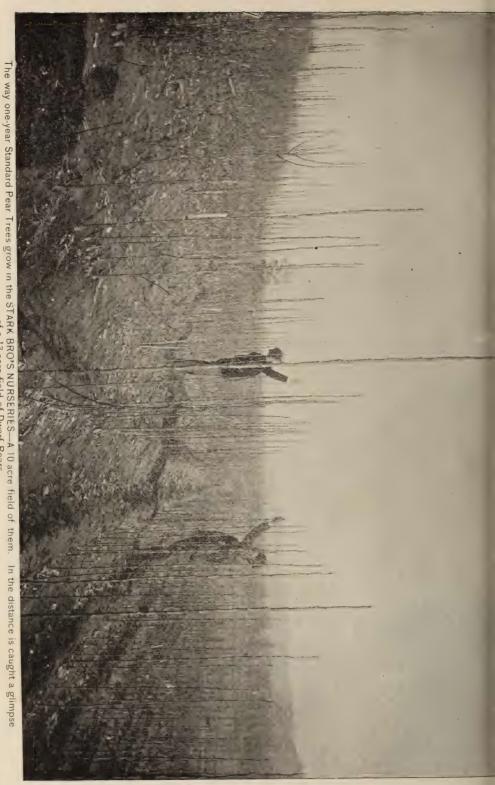




View in 160-Acre Field of Apple Trees.



White Lilac is like the purple with exception of having pure white flowers.

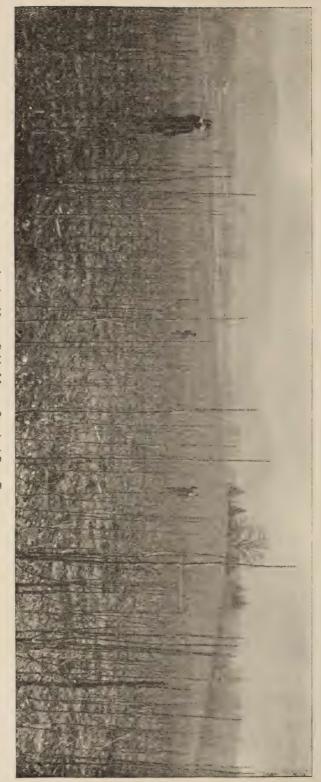


N. B.-This is nor the way 1-yr or 2-yr. "mail-size trees" are produced-decidedly nor! Closely bedded-out piece root grafts can never make trees of such health and vigor in 1-year. The way one-year Standard Pear Trees grow in the STARK BRO'S NURSERIES—A 10 acre field of them. In the distance is caught a glimpse of a 13-acre field of Dwarf Pears.



when not trellised.





Another 10-acre field of 1-year Standard Pear Trees.



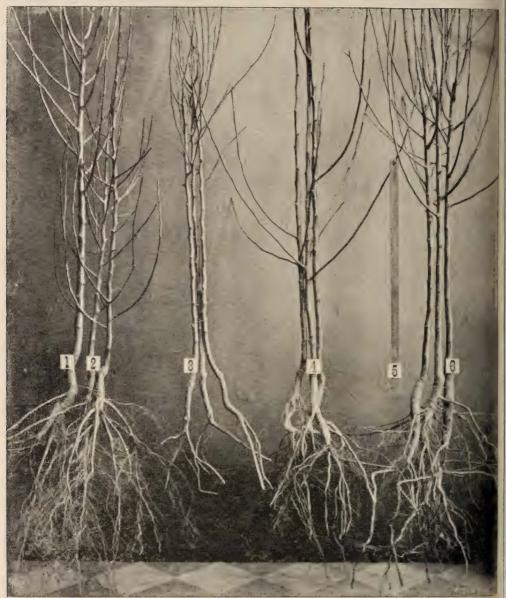


SPIREA BILLARDI

A very showy shrub. Flowers rose colored, in great spikes. Hardy, and easily grown; requires but little room. Blooms nearly all summer.

Important

OLD DAK PROCESS WHOLE ROOT TREES



- 1.—Garber, 2-yr., XX O. O. P., Whole Root.
- 2 Two Kieffer, I-yr., O. O. P., Whole Root.
- 3 Three Flemish Beauty, on Le Conte Piece root stocks—as sent out by—
- 4.—Three Garber, 1-yr, O. O. P., Whole Root.
- 5.—Yard Stick—one and one-sixteenth inches Wide.
- 6 Three Kieffer, 2-yr., O. O. P., Whole Root.

The above except the trees on Le Conte cuttings, were grown in our Nurseries.



HYDRANGEA (H. PANICULATA GRANDIFLORA).—One of the finest flowering shrubs, blooming from July to September, when very few shrubs are in bloom. It blooms the first year and can be grown anywhere. Hardy and vigorous. The flowers are white, borne in immense pyramidal panicles nearly a foot in length. The plants should be CUT BACK EVERY SPRING one-half of the last season's growth.



Digging O, O. P. Whole Root 2-Yr. St'd Pear Trees by STEAM Power—Used no where else but in "THE GREAT MO. & ILL. NURSERIES."
Mississippi River Bridge and Illinois Shore in Distance.

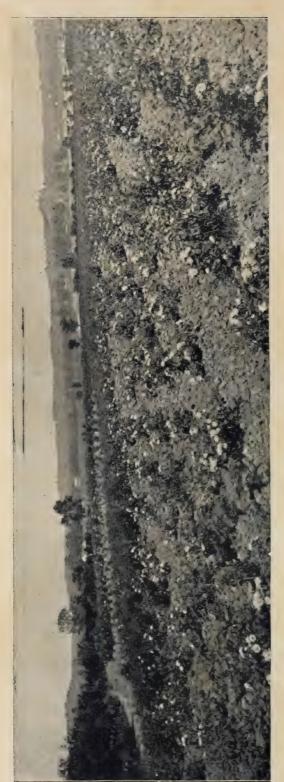


Best of all HARDY climbing roses. Bright rosy red, frequently with white stripes on petals; blooms in clusters; a vigorous and rapid grower.



"June Time is Rose Time." View in a Twenty-Five Acre Field of Roses.





Another Field of Roses,



One of the sweetest and most beautiful roses, and the strongest grower, healthiest and hardiest moss rose we have ever grown. Deliciously fragrant. Buds almost hidden with lovely green moss.



SPRINGDALE.

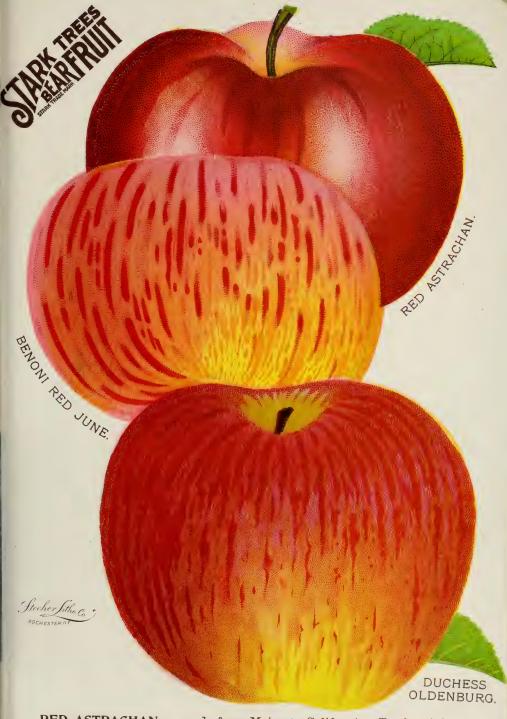




YELLOW TRANSPARENT, finest apple of its season. Best summer apple in Minnesota, fine in Texas, good everywhere. An enormous bearer, and bears at 2 years. Dwarfish grower; use as a filler, or plant close—12 to 16 ft. Excels E'y Harvest; earlier, larger, bardier, and better everyway than Tetofsky.



OLD OAK PROCESS WHOLE ROOT TREES



RED ASTRACHAN succeeds from Maine to California. Tender, juicy. BENONI, the best apple of its season, far finer than Red June. Because of its beauty, fine quality and firmness—almost like a late sort—we especially recommend Benoni as an excellent apple to ship long distances.

DUCHESS (Oldenburg), is hardy and profitable, especially north, for its early bearing and endurance of severe winters; fine in Texas—and everywhere the Great Cooking Apple. The demand for Duchess in the Chicago market has never yet been met.

STARK FRUIT

OU OAK PROCESS





JEFFERIS (Everbearing), finest for table and market during nearly three months. "Flavor equal to a good pear." The best orchardists are planting it largely.

PROF. VAN DEMAN: "Choicest early fall apple known. Most constant and abundant bearer.

No orchard should be without it."

PRES. RIEHL: "Best late summer apple. Finest flavor. Always bears full. Splendld for both market and family. No apple brings more money."

F. I. MANN, Ill.: "Best for both table and market, and brings more money in Chicago than any apple of its season. Has PROVEN HARDY and an EXCELLENT BEARER."



STARK TREES BEARFRUIT OLD OAK PROCESS WHOLE ROOT TREES



MAIDEN BLUSH, well known all-round apple. Tender, sprightly, brisk sub-acid. Valued for market, also for drying.

WEALTHY, A most valuable apple of fine size, appearance and quality. Young, sure and too profuse bearer. Very hardy.

RAMBO, an old and widely esteemed sort. Not hardy while young; thrives particularly well on light or sandy soil.

WOLF RIVER, GIANT

THIS giant fruit is the most magnificent apple, whether on the tree or off, that has ever fruited in a Missouri orchard. Attracts more attention than any other. Unlike other large apples, it does not drop, hangs even better than Ben Davis, is a good eating apple, a most excellent cooker, and outshines and outsells all other large apples on the market. Best sort to follow Wealthy and on both upland and bottom.

Photo of a six-year tree that bore a barrel of fruit. The apples were gathered, measured and sent to the St. Louis Exposition—one basket of them to E. C. Simmons, President of the Simmons Hardware Co., the largest hardware firm in the world, who wrote us: "They are the best cooking and finest apples I ever saw."





WOLF RIVER, the GIANT SHOW APPLE, after full tests, proves to be a variety of Exceptional Value.





BALDWIN, celebrated winter apple east; FALL, west and south.
BELLFLOWER IMPROVED (Mason Orange), is of best
quality, even better than Grimes Golden. Seedling of Yel. Bellflower, closely
resembles it—but is of still better quality, YOUNG AND REGULAR BEARER.
YELLOW BELLFLOWER is of good quality, but a TARDY AND SHY BEARER.

GRIMES GOLDEN, one of the very best and most profitable late fall and e'y winter apples. Particularly valuable for its late blooming.

U. S. Pomologist Heiges: "In N. C. orchards Grimes Golden, Ralls Geneton and Rome Beauty are found very valuable owing to LATE BLOOMING. York Imperial is also extensively planted."

Am. Pomological Society.

Prof. J. L. BUDD, before the late session of Am. Pomological Society, at Washington, Sept. 1891:

"SECTION VS. WHOLE ROOTS IN PROPAGATING
THE APPLE.

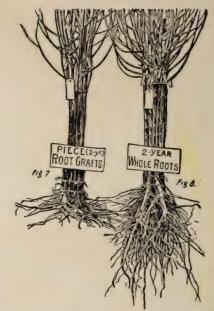
"This subject has been discussed pro and con during the past 30 or more years. In sections where injury of apple trees in nursery and orchard by root killing is unknown the BUDDED OR CROWN GRAFT-ED trees are PREFERRED. But even in these favorable sections the use of healthy and vigorous seedlings has been urged.

"In Iowa the use of long cions and short roots has been advocated. * * * But some of our careful experimenters have found that LONG CIONS and LONG ROOTS have MADE the STRONGEST and MOST UNIFORM TREES in the nursery and the MOST ENDURING TREES in the orchard.

(Continued on next page.)



[Photo-engraving showing: 1. Piece-root apple, 2-yr., 8 to 4 ft. (and yard stick.) 2. Plece-root apple, 2 yr., 4 to 5 ft. 3. Whole root grafted apple, 2-yr., X.]



[Photo-engraving showing: Fig. 7, Piece-root Ben Davis, 2-yr., X. Fig. 8, Whole Root budded Ben Davis, 2-yr., X. Scale nearly one-half less than preceding cut-1, 2 and 3; both preceding and above were engraved from photographs of trees grown in our nurseries.]



Fig. 1. Plece-root tree, 3 yrs. old. Fig. 2. Formation of Plece-root grafts. Both show how piece-root trees "nearly always root on one side." The above is engraved from two of a series of photographs used by PROF. L. H. BAILEY, of Cornell University, in illustrating an address on Root Grafting and Budding before the Am. Nurserymen's Association.



JONATHAN, "Queen's Favorite"

A most delicious seedling of Spitzenburg. Tree far longer lived than Ben Davis. For last few years has sold higher than any other apple—see Chicago and other market reports. A great export apple; even Queen Victoria lately

had a carload sent over for the royal table.

Jonathan must be planted with other sorts for cross-pollination—in fact it is always safer to plant several sorts rather than large solid blocks of ANY one variety.

Apples keep far better if picked soon as the seeds are brown; this is applicable to Jonathan and all apples which do not hang well until Oct 1st, as well as to summer and fall apples intended for shipment.

WORTH 50 YEARS OF LIFE, says Prof. Bailey, to discover this cure for chronic constipation: Eat ripe fruit, all you can, half hour before each meal time—and at no other time if case be severe. Will restore health and strength, "renew youth," give sound sleep, bring happiness. Try it—worth more than money.

"To illustrate: A few years ago the writer put up 3,000 grafts with cions 7 inches in length INSERTED AT COLLAR of the UPPER SIX INCHES of STRONG SEEDLING ROOTS. These long grafts were set down to the top bud of the cion in trenches. By their side were set 3,000 grafts made with 8 inch cions set on TWO INCH SECTIONS OF ROOTS. The results in nursery were very striking. The long crown grafts made a uniform growth of four feet the first season, while the lower section grafts ranged from one to three feet in height with many gaps where root and cion died together. When three years old the difference in height of the best specimens of the section grafts were less, but a large per cent of them that lived were short and slender, and not five per cent of them equaled the poorest of CROWN GRAFTS in height, stockiness or THRIFT

"When finally dug the ROOTS ON the CROWN GRAFTS were by FAR THE STRONGEST and MOST FAR REACHING. But as a rule the section grafts had the most fibrous roots within 18 inches of the crown.

"In orchards the CROWN GRAFTS are yet AHEAD in SIZE, uniform GROWTH, HEALTH and BEARING. As they were not of the varieties which have stood the test of recent winters their number has been sadly decimated, but the per cent. of GOOD TREES is MUCH IN FAVOR OF THE CROWN GRAFTED LOT.

"Joining personal experience with that of hundreds of careful observers OF IOWA, we MUST conclude:

"That it is not profitable to use lower section roots as they give too many culls, and that EXPERIENCE HAS SHOWN that they are LESS GROWTHY AND ENDURING trees in orchard than those made from crown roots. The most profitable tree is from the LONG CION set ON A CROWN ROOT not less than six inches in length and planted down to the top bud of the cion.

"The argument of some nurserymen that these long grafts are expensive to make and set HAS LITTLE WEIGHT. The trees stand deeper in nursery, and are harder to dig, but the increased labor is far more than compensated by the STRONGER and RETTER distributed ROOT SYSTEM."

LIFE is too short and time too precious to be wasted in making experiments to prove facts already demonstrated. The greatest scientists have only had time to prove for themselves a fact here and there. If we do not accept the facts established by others, the entire fabric of knowledge must go to the winds. Rather let us profit by the knowledge already accumulated by the best minds the world has ever seen. Therefore be not deceived by the selfish arguments of men who hope to profit by selling you piece-root trees-you have observed, no doubt, that in all matters of argument, the predisposition is largely controlling-men always accept more readily that which they prefer to believe. Hence, ordinary business precaution will indicate the prudence of hearing, also, disinterested testimony. frue, we have Whole Root trees to sell; we also grow piece-roots-for those who want them. Directly the latter pay us as much or more than Whole Root trees. Yes, we grow both kinds, but we differ in our views from that nurseryman who preferred short-lived orchards that he might sell the more trees.

But admit that our judgment may be biased; or, if you please, that we are wholly selfish in recommending Whole Root trees. How will you dispose of the matured judgment, formed and expressed, after long years of patient research, observation and experience

with trees of every kind, by men pre-eminent in the science of Horticulture, such as Chas. Downing, P. Barry, and so many others—than whom no higher authorities have ever lived in America—or in the world.

Prest. P. J. BERCKMANS, in his valuable work on "THE APPLE," written in 1867, said:

"Standard trees should be propagated only upon bealthy and vigorous stocks, EITHER by grafting or budding. The system of grafting upon pieces of roots IS WRONG, to say the least of it. As this is the cheapest and quickest method to manufacture trees, it is much resorted to by some nurserymen, NO LASTING RESULTS can possibly be expected from trees propagated upon this plan. They never form any but small fibrous, HAIR-LIKE roots, and when planted in the orchard they require staking, and SELDOM ever MAKE A GOOD TREE. Several years ago we denounced this system as WORTHLESS and ONLY CALCULATED TO DISAPPOINT THE PLANTER. Our opinion is SUBSTANTIATED by that of RELIABLE CULTIVATORS."

"Twenty or more years ago," writes Dr. W. W. Stell, "when I was preparing to propagate trees, I wrote to P. J. Berckmans for information—and many times since, the last time within a few months. He has ever advocated the same system.

"Mr. Berckmans,"continues Dr. Stell, "is a horticulturist with no superiors, and with but few if any equals, in this country. By true merit he has reached and now stands upon the top round of the horticultural ladder, for he is to-day the honorable president of the Pomological Society of America."

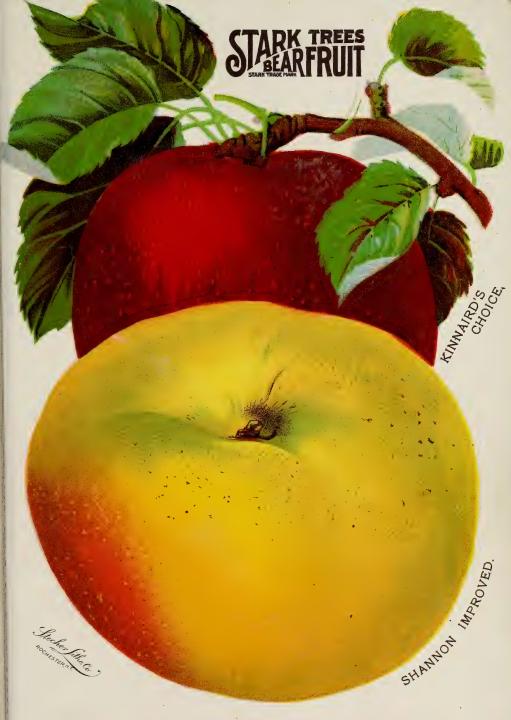
In the last correspondence with Dr. Stell, Prest. Berckmans wrote:

"My experience in propagating trees dates back to 1840. I then grafted some cherry trees, which, when I saw them last in Belgium, in 1884, were in a vigorous condition. Since 1840 a few millions of trees have been propagated under my supervision, and mainly by my own hands, therefore I refer back to 50 years practical experience, 40 of which I have lived in Georgia, and I hold from close study of fruit tree growth that the most desirable method is to use a whole seedling as a basis for a tree if a standard is expected."

The following is condensed from a letter recently written by Prest. Berckmans, in answer to an inquiry from Dr. Ragland, editor of the Southern Horticulturist and Farmer:

"Dear Sir—Your favor is received. I have read several articles lately in Texas and California horticultural journals on the question of whole roots and piece roots in propagating apple trees, and you ask my opinion in the matter.

"I hold that for a standard tree a WHOLE seedling stock should be used. A tree grafted upon a piece of root will, under proper cultivation, make a very satisfactory growth for a year or two while in the nursery row, but, with few exceptions, it will begin to decline after attaining the bearing age in the orchard. While piece-root grafted trees form an abundance of SMALL FIBROUS roots, they are deficient in strong, penetrating roots, and draw their sustenance wholly from the surface and when not kept well fertilized FAIL to continue in vigorous growth. But as I said, the critical period of the life of such tree is in reaching the bearing period; few survive over two or three years AFTER PRODUCING FRUIT. The history of all pieceroot worked trees planted in orchards since 1860 has been the same-eight or ten years of life, a few small crops of fruit, and then DEATH.



KINNAIRD CHOICE (Kenyon Red), a magnificent early winter apple; best quality, very hardy, very prolific—and bears very young.

SHANNON IMPROVED—sold only under Patented Trade Mark. The grandest yellow apple. Color, size, shape, flavor, quality, same as the old Shannon, but keeps better, bears better, bears younger, bears on thin soils, and is full every year—in 20 years has never failed.

"There are many old apple trees in this State which are still healthy and productive, though planted long before the era of piece-root grafted trees; they were either seedlings, or propagated by the OLD HONEST METHOD of using a WHOLE healthy seedling as a stock. In comparison with piece-root grafted trees. I consider apple trees budded or grafted on WHOLE seedling stocks as FAR SUPERIOR. Fully 90 per cent, of apple trees budded on whole stocks should grade at the end of the first year 4 feet. In pieceroot grafts fifty per cent. can seldom be expected to reach 3 to 4 feet, the balance ranging from 12 to 36 inches, and the second year not above 40 per cent. are salable trees that can be graded to the two-year-old standard. The third year finds still more trees failing to come up to grade—as the small fibrous roots have by that time exhausted the plant food in average soils.

"All intelligent fruit growers know that a tree which has grown off VIGOROUSLY in the nursery row the first year and is at that age as large as another will be at two years, is the most desirable, is apt to succeed best, and is equal or superior to a two-year-old tree of lesser growth; hence, to obtain the object in view, LONGEV-ITY and FRUITFULNESS, a tree should have for basis a healthy stock, capable of PENETRAT-ING the soil with STRONG roots, and an abundance of LATERAL roots to draw its nutrition.

"Yours truly,

P. J. BERCKMANS."

1st Vice-Prest. T. T. LYON: "It is plainly against nature to take a cion which has grown high up in the sunshine and air, place it almost wholly underground, quite out of its proper element, and then expect that it can so completely change its nature as to make a perfect root system, a crown, and a topall from a short cion formed by nature for aerial conditions alone."

Later, Prest. Lyon writes us: "I have read the article in Rural World on Whole-Roots and Piece-Roots. I regard its doctrines and the proposed practice AS SOUND. . . ."

[Italics, where used, are so indicated in the originals; but the heavy type are ours.]

Treasurer BENJ. G. SMITH, (Prest. Mass. Ag'l Society, Vice-Prest, Mass. Hort. Society, member Am. Forestry Congress, member Am. Society for the Advancement of Science, etc.,) wrote us Mar. 28, '91:

"If I were engaged in fruit culture commercially, long 'ere this you would have received an order from me, as I thoroughly believe in whole stocks for grafting. Your excellent circular, from my dear friend, President Berckmans, I think must convince all unprejudiced minds. . . . My intense love for horticulture has stimulated me to make the most of my grounds, which are largely devoted to testing best varieties of fruits. . . . Please send me 12 pear trees, selected trees on whole stocks, your choice." Later, Apr. 3, '91: "Your esteemed favor at hand, for which please accept my grateful thanks. . . . It will be a pleasure to speak a kind word for the Nurseries where whole stocks are used."

FRANKLIN DAVIS, Ex-Vice President Am. Pomological Society, writes of piece-root trees:

"The roots from these small pieces cannot be so well developed as to properly feed the tree or hold it up; hence, they are often uprooted by storms. We must plant the whole stock, leaving the crown as nature formed it; then we have the whole root. strong and unimpaired by division to feed and develop the tree. As the tree is not only held in its place by its roots, but also receives most of its nourishment through them, it is plain to see why it will GROW

LARGER, LIVE LONGER and BEAR MORE Of whole root trees he says: "The superiority this mode of propagation has long been acknowledg by intelligent nurserymen and orchardists, yet nin tenths of the apple trees sold are grafted c pieces of roots. Nurserymen have not grown tre on whole roots for the reason that it costs more on whole roots for the reason that it costs more propagate them that way, and it has been difficult to g many planters to pay that additional cost, but we a glad to see the people awakening to their interests, V KNOW such trees ARE THE BEST; and making an improvement so important as an orchathere is no economy in using an inferior article."

The late P. BARRY, for many years the at Secretary of the American Pomological Society, descring the operation of budding in his well-known boo "Barry's Fruit Garden," speaks of high and low budding and the necessity for the latter; after giving treasons why stocks should be budded as close to the su face of the ground as possible, even removing some the earth, sums up the whole matter in a few words "low budding makes the best trees." Of the kindr Of the kindr operation of grafting he wrote, as late as 1890:

"Very good trees are produced on pieces of roc three or four inches in length; but there is n doubt that the cut next to and including THE COLLAR IS TO BE PREFERRED

[But instead of three inch pieces, the piece root me say "se one to two inch pieces, the piece root mobile the shorter than the shorter

CHAS. DOWNING, in the great work of his lif "FRUITS AND FRUIT TREES OF AMERICA," say "Large quantities of trees are propagated by using pieces of roots, thus forming from the root of one stoc two, three or more grafts. This practice, although quite common, is of VERY DOUBTFUL value ar by prominent horticulturists considered as tending debilitate and reduce vitality-the seat of vit life in fact resting in the natural crown of the see ling, and that, once destroyed, cannot be renewed. is therefore, apparent that but ONE HEALTH PERMANENT TREE can ever be grown FRO

A SINGLE SEEDLING STOCK." Judge S. MILLER: "Growing apple trees on whole stock, instead of cutting the roots into pieces,: whole stock, instead of cutting the roots into pieces,; is the usual practice with nurserymen, is a mode I have long advocated; but at present prices of apple trees don't pay unless a better price be paid for the tree P. Barry wrote some years ago that what he considered a good graft was to use but one whole root to tree. At the time I endorsed the idea and have a since changed my mind."

Later. Judge Miller writes us: "You may be please to learn that many letters reach me expressing approve of the stand I have taken on whole Roots. One of orchardist writes that he knows we are right. My in pression is that it will not be long ere no pieces of row will be used in grafting trees. The whole root is it natural system and we cannot stray far from this ling without deterioration scoper or later. without deterioration sooner or later.

Later: "I see that there are still some who profet to prove that Piece Root trees are as good and as lon lived as if worked on whole roots. I wish I could tak such men back sixty years and show them trees two fin diameter and 40 feet high, bearing wagon loads their glory long after other trees planted many year were dead—but which had been worked on the nevextern of cutting the roots into pieces. system of cutting the roots into pieces.

"It requires but one sober thought to convince anyor that 'a tree is a tree,' and that nature never intended seedling to be mutilated. This thing of their becomin established on own roots in the end will not hold out, for I have dug thousands of trees in nursery that had but few small roots emerging from the graft. Of course i after years they may strike out roots in self defense.

"On some of our Western prairies I have seen orel ards inta about ready to bear agree of them. all leaning

"On some of our Western prairies I have seen ord ards just about ready to bear, acres of them, all leaning to the N. E. at an angle of 45 deg., just the position to get sunscalded on the S. W. side, so as to give the flatheaded borer a chance. The end of such orchards not far off. Were these trees grafted on whole roots an properly planted? They were not!

Later, Oct. 14, 1890: "Whole Root grafts got of yolast Spring are nearly double the size of the piece-roots."



Later: "'F. & F. T.' is an excellent production and I am reading it through. At the Mo. State Hort, Meeting, I recommended your trees to all and defended Meeting, I recommended your trees to all and defended you against malicious attacks made in an indirect way. The simple and plain truth is the nurserymen are all envious of the colossal enterprise you have built up, and are afraid of you. It is not your fault that some other firm has not grown up like yours. My wish is that in a few years you will have made money enough to retire and plant your orchards, and then see what another party or company will make out of it, if you sell to them.

"At the Farmer's Institutes I will distribute your catalogues, as well as recommend you in my lectures. But you can scarcely have any idea how these nurserymen pick at me for the interest I have taken in your affairs, and for recommending your stock. What else can I do? They must follow suit if they want to keep pace with the times, In less than 5 years they will all want to nse whole roots instead of pieces.

"So long as you have the highest authorities on your side, the piece root men may snap and snarl until they are tired. As for me, if a time comes when I dare not express my opinions fully and fairly, the pen will be laid down, and horticultural meetings no more attended.

Later, June 8, '91: "To-day I answered a letter from a man who will plant a large orchard and who wished my opinion as to whole vs. piece roots, and where he could get them and not be cheated. I told him whole roots every time, and that Stark Bro's, Louisiana, Mo., was the only firm that had trees of proper age thus worked, and that he might rely on what he got from you.

Prof. H. E VAN DEMAN, U. S. Pomologist, says: "Some years ago I made a series of experiments in Eastern Kansas with root grafts, using piece roots from an inch long from different places on the root, up to the whole root twelve inches long. best success with the **top cut six inches long**. Thosa the best success with the **top cut six inches long**. Those that were twelve inches long **did not** develop roots below. These experiments were made with the Ben Davis apple, which is one of the best varieties to throw out roots from the cion or cuttings."

Prof. THOS. MEEHAN, a life member of the An. Pomological Society, for 30 years the editor of the Gardener's Monthly, now editor of Meehan's Monthly, for more than 50 years a practical nurseryman, and to-day one of the leading American scientists, says :

"There is a fallacy concerning fibrous roots which "There is a fallacy concerning fibrous roots which should be corrected. It is generally believed that a plant having many hair-like fibres on its roots is the best for transplanting, but this is wrong; these fibres bear the same relation to the main roots that leaves bear to the branches, and last only as long-4. e., each season they are renewed. A few weak, fibrous roots alone are of no value to a tree whatever, as it is the LARGE ROOTS which are FULL OF STRENGTH that push out the new white rootlets which gather nourishment from the soil. It does not matter how fibrous-rooted a tree may be; thousands of the small fibres must die before becoming established the small fibres must die before becoming established and the white roots are started, as science teaches us that it is only at the tip of the NEW fibres that growth is made.

Prof. L. H. BAILEY, Dep't Horticulture Cornell University: "Cutting a root into pieces allows us to **make more trees** from our stocks. It allows us to to make more trees from our stocks. It allows us to double and treble, and sometimes even quadruple trees. It cheapens multiplication, hastens multiplication. But there are disadvantages in this method of propagation. The roots from piece-rooted trees always are more prongy, not so deep, more horizontal, have more tendency to grow near the surface, and have not nearly so many roots AS WHOLE ROOT TREES. When roots begin to form from a cutting they nearly always form on ONE SUDE and ROOT TREES. When roots begin to form from a cutting, they nearly always form on ONE SIDE and have a tendency to push out and grow in one direc-tion. I have root-grafted a great many trees, and in nine cases out of ten the roots were a great deal name cases out of ten the roots were a great deal heavier and stronger upon one side than the other. Whether the tree overcomes these disadvantages later in life I cannot say. Root-grafted trees as a rule make a smaller growth the first year. The tree has not so much root to start it off. The union in piece-root trees is apt to be imperfect,—persons who are careful in their observations have made that returned. ful in their observations have made that statement. Root-grafted trees tend to be **more straggling** than trees which are worked upon whole roots. They are apt to tip over in the orehard, and are not so longlived as others.

"Now I wish to speak of the advantages of whole "Now I wish to speak of the advantages of whole roots: We get BETTER, DEFPER and FINER ROOTS UPON TREES WORKED ON WHOLE ROOTS. These trees HAVE MORE FORCE—larger engine and larger power behind. They grow teller the first year. Many say the crown of the tree must be a vital part of the tree. A great many think the crown is the best place, and as between crown and root, it would seem TO BE TRUE."

ILL. STATE HORT. SOCIETY.

From Report of 1890.

"The exhibition of nursery stock was the best ever made at these meetings. That of Stark Bros., of Louisiana, Mo., was exceedingly varied and interesting, and illustrated the various modes of propagation practiced by them. . . ."

Prof. T. J. BURRILL: "But fairness demands the mention that in the excellent samples shown in the adjoining room by the Stark Bro's, there is more evidence of the unhealthy swelling on the piece-roots. . . ."

The following, by C. M. Stark, of Louisiana, Mo., bearing on the question, was read by Prof. Burrill—(on the last afternoon of the meeting, after the departure of Mr. Stark):

The actual truth about this matter is what is wanted. If piece-root trees are just as good as whole roots, we want to know it, and if not as good we want to know Prof. Burrill has shown us that in grafting, it. Prof. Burrill has shown us that in grafting, the cells of cion and stock do not actually unite, it being impossible for two cells to unite to form a single cell. But when we graft a seedling just above the collar on the close-grained, tough wood, grown like the cion above ground in the light and air, the cion and stock, having a similar cell structure, form a more perfect union than the same cion would form on the softer and more spongy wood of the second or third cut of the seedling root. Prof. Burrill also mentioned the swelling or enlargement so noticeable on piece-groot grafted trees which he Prof. Burrill also mentioned the swelling of enlargement so noticeable on piece-root grafted trees, which he says shows a faulty union. In piece-root grafting you may splice the top cut just above the collar, but when you cut it off with but two inches of root, your tree, while having good surface roots, will not put out any penetrating roots. Now graft the **second** cut and penetrating roots will sometimes put down from the lower end, but the tree lacks the surface feeding roots given the seeding by nature: but make this second cut four end, but the tree lacks the surface feeding roots given the seeding by nature; but make this second cut four inches long instead of but two inches, and it will always put down several deep-reaching roots. Now why not have both the surface feeders—as well as the natural crown or collar of the top-cut—and the strong, deep roots of a long second cut for our orchard trees? Well, this is exactly what is gained by whole-root grafting. The splice is made just above the crown, and the long tap root of the seedling shortened to 6 or 7 inches, which causes it to branch just in the same way a vigorus one-ver tree to branch just in the same way a vigorous one-year tree does when its one straight shoot is topped back to form a head. Of course the entire unshortened root is never used, at least, not if the work be rightly done, yet the trees are whole root trees in the sense that all the essential parts are used, and but one tree can be made from one seedling.

Now it is plain that such a whole-root tree is worth at least as much as a piece-root tree; Pres't Berckmans, Downing, Prof. Bailey and others say it is worth far more. This being so, it is certainly the part of prudence to investigate before we plant our orchards with piece-root trees.

Some ten years ago, when I was as strong an advocate of piece-root grafting as any one could be, I decided to plant an orchard of 130 acres. About this time I got hold of Downing's "Fruits and Fruit Trees of America," and read what he says about the natural crown being a viral part of the tree. This started me to investigating, and the result was I made up 10,000 Ben Davis and 7,000 Willow Twig whole-root grafts for my future orchard, using, however, only about 3 or 4 inches of the root, instead of 6 or 7 inches as now. Well, the trees were taken up at 2 vrs. old, but by this time. of the root, instead of 6 or 7 inches as now. Well, the trees were taken up at 2 yrs, old, but by this time, like most nurserymen, I found I had already more work on my hands than I could attend to without the orchard, so the trees were sold. Pres' H. M. Dunlap bought and planted part of the Willow Twig, 500 or 600, I think.

Prest. H. M. DUNLAP, some time after receipt of the Whole-Root Willow Twigs you sent us this year were the finest of this variety I ever saw, and I was somewhat in doubt as to their being true to name, but on closer examination I find they show the characteristic Willow Twig growth."

FURTHER LIGHT upon this important subject and, as the well-known Orange Judd says, "much other trustworthy information for all who grow fruit of any sort or kind," may be had in "FRUITS AND FRUIT TREES," sent free to all who will take the trouble to write a postal card to Stark Bro's, Nurserymen, Louisians Mo. for the post iana, Mo., for the book.



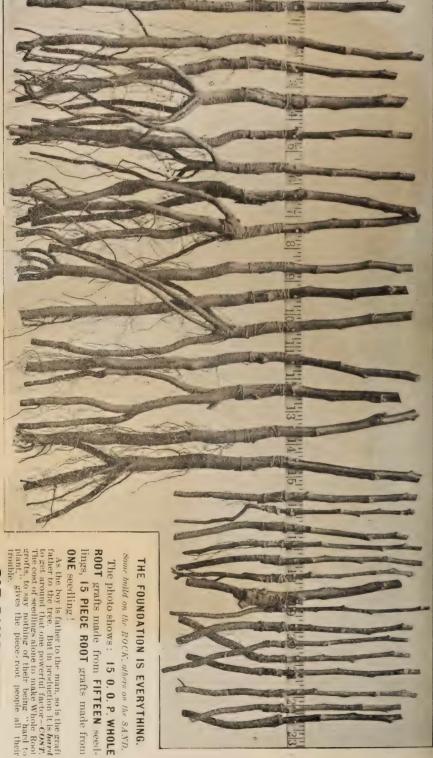
BLACK BEN DAVIS-801d ONLY Under PAT'D TRADE MARK

Seedling of Ben Davis and a great improvement. Like Ben Davis every WAY, but MORE BEAUTIFUL color, BETTER QUALITY and a BETTER KEEPER—three VERY IMPORTANT POINTS "Beautiful to look at and gets extra good."

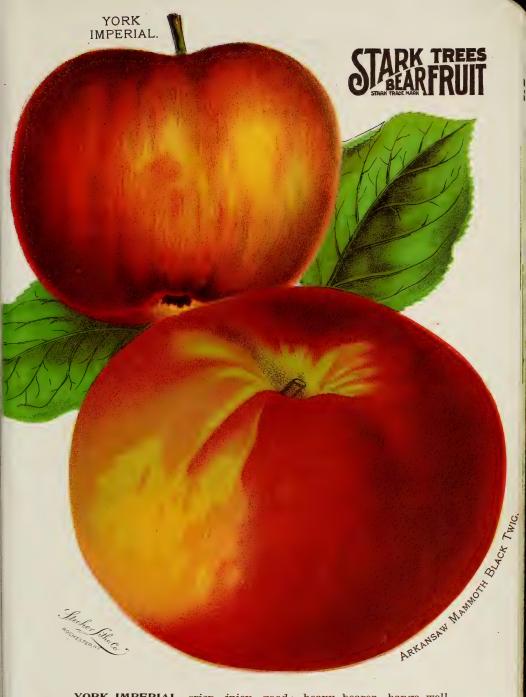
Far and away better than Gano: Decidedly larger, fully equal to Ben Davis; Gano is smaller. Longer keeper and does not "scald" in cold storage; both Gano and Ben Davis do scald. A more SOLID, DEEPER RED color; Gano often lacks color. Very much better quality; Gano is no better than Ben Davis. In brief, Black Ben Davis is what Gano ought to be—but IS NOT. We are convinced it is going to be one of the most popular market apples grown. Has already been well tested.

Originated by Mr. Black in N. W. Ark. in 1869. Later, 9 trees were grafted and set in orchard where they have regularly excelled Ben Davis. No other trees in existence.

Smoontant



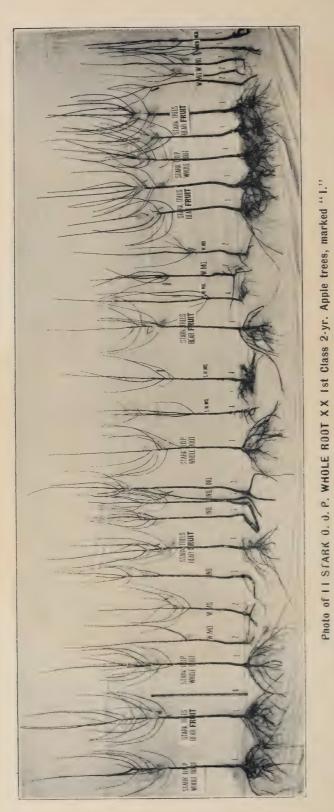
DID DAK PROCESS



YORK IMPERIAL, crisp, juicy, good; heavy bearer, hangs well, good keeper. Grown with great success, Central and South.

MAMMOTH BLACK TWIG, the true variety, is THE apple to plant on poorest soil; does well on land entirely too poor for others. The true Mammoth Black Twig is a different and far better apple than Paragon, of Tenn. The great reputation of the M. B. Twig was first made in the vicinity of its origin in Washington Co., Ark. The writer lately made a 3 weeks' trip through the mountains of this section, where, near Rhea, is the original tree, 65 years old, 6 feet, 8 inches in circumference, 2½ feet above ground,—fruit from which was shown at the Ark. Hort. Society. Certainly finer apples were never seen; indeed, the largest apple shown was a Mammoth Black Twig, weight 20 oz.

We had long been getting M. B. Twig scions from N. W. Ark., but to be absolutely sure of true stock, we have again gone back to the original tree and a nearby young orchard grown directly from it.



Also 17 regular " 1st Class" trees (pc. rt.), from four different nurseries, marked 2, 3, 4, 5, respectively.









CHAMPION (Coss' Champion, Champion Red, Collins Red)—Of the six new N. W. Ark. apples now offered, only this and Senator were ever exhibited until at the STARK FRUIT FAIR. Both have excited great interest ever since shown at the World's Fair, where they took the lead among 60 worthy new sorts. In the only neighborhood where they are grown, they lead Ben Davis and all others, planters saying, "wish all our trees were Senator and Champion."

For quick profit, Champion surpasses Mo. Pippin—yet the old 40-yr. tree still bears fine fruit. Excels Willow Twig in value, quality and keeping. Large, good color, long keeper; juicy and does not become dry—yet flavor is its one lack. Hangs a month longer than Ben Davis, bears younger and fuller. Tree strong jointed, shouldered like E'y Harvest, tough and hard to break; 8-yr. trees averaged OVER 5 BUSHELS fine apples.

The week before our visit, the Olden Fruit Co. scoured the country, seeking a MARKET apple which would hang longer than Ben Davis. They found Champion and—went away satisfied.

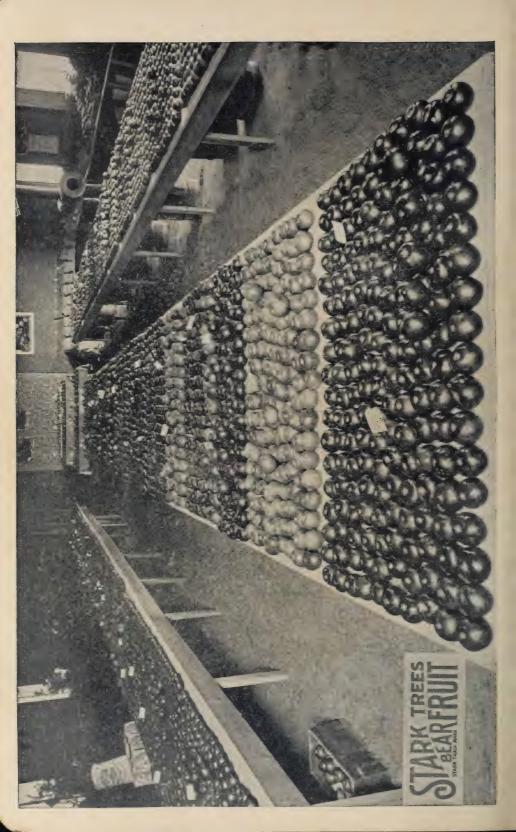
STARK TRUIT



SPRINGDALE, an extra fine long keeper. Took the First Prize at the Ark. Hort. Soc., and attracted great attention at the World's Fair. The old tree has never failed to bear and the young ones are more than ever convincing us that Springdale is a new variety of unusual importance. Excellent quality. Good grower, wood very hard and tough; hardy far north.

"Nature Abhors Self-fertilization," says Darwin. Not only Plums, but Pears, Apples and all fruits are more fruitful if several varieties are planted together, mingled or rows alternated, rather than large blocks of any one variety.

IF ONLY FRUIT of Best Quality, Properly Packed, went on the market, there could be No Such Thing as Overproduction. It is the Poor Stuff, Poorly Packed, that breaks the market, reducing prices of the Good Fruit.





LEGAL TENDER, most valuable of all long keepers—excepting only Apple of Commerce. Very large, larger than Ben Davis, but don't drop—still hanging well Oct. 21st, when Ben Davis and others had fallen. Good color. Good seller. Quality fine. Long keeper—while cutting cions Mar. 1, found apples that, after lying all winter on the ground under the trees, were perfectly sound.

Tested 21 years. Tough wood, hard to break; not so good a grower as Ben Davis but better bearer—"bears to beat Ben Davis and M. B. Twig all to pieces, don't drop, almost as good quality as Kinnaird, and KEEPS like Limber Twig."

The six new N. W. Ark. apples we believe surpass anything now in cultivation. As compared with each other, we value them in following order: Apple of Commerce, Legal Tender, Senator, Black Ben Davis, Shannon Improved, Champion—and even the latter pays better than Mo. Pippin, Ben Davis, Willow Twig, etc. Sold ONLY Under PAT'D TRADE MARK.

Vast Experiment Station, people planting seeds of the best apples they knew—hence so many valuable new sorts—literally thousands, many of them good, some better than good, a FEW SUPERLATIVE. But we paid no attention to any sort that lacked any one of our five absolutely essential requisites: Size, Color, Quality, Vigor, Productiveness.

good care of that number, in 15 years their product would BUY ANY FARM ADJUINING MINE. How often I've wished I had take his advice and to the nursery to get the first fifty apple trees I planted, he asked me why I did not plant 500 instead of 50, assuring me that if I would plant and take my memory was that those boys always had apples. My recollection of old Uncle Jimmy Stark reaches back to the year 1828. In 1852, when I went of my Boyhood is meeting the Stark boys (father and uncle of the present Stark brothers) in school or at the old horse mill. One thing that impressed lanted 5 times 500." How, T. M. Carroll (whose photo appears with the 42-year-old Stark O. O. P. Tree), writes the Louisiana News: "Among the earliest recollections



Hard, tough wood, never breaks or splits. Largest leaf and finest grower we know. Bears at 4 yrs. and better than Ben Davis—bears too much. Sure bearer—14 CROPS IN SUCCESSION, without a failure. THE MOST BEAUTIFUL apple known, not even excepting Senator, with a heavy blue bloom. Averages larger and a "SIGHT better" quality than Ben Davis—ALMOST good as Winesap at its best. Keeps into June. We shall plantit fast as trees can be had, AHEAD OF ALL OTHERS.

As USUAL it is NOT TRUE

Every now and again this firm is informed that competitors are active in stating that STARK BRO'S do not grow trees, but are simply tree dealers, buying their stock from other nurseries—particularly from themselves.

The best way to refute this and bring the facts visibly before the eyes of those who have not visited the STARK NURSERIES to see for themselves, is to state that STARK BRO'S are the only Nurserymen in the U. S. who publish so many practical photo-illustrations of their nurseries and orchards, and at the same time freely invite the public to **visit** and **confirm** the truth of their pictures and statements.

The first actual reproduction of scenes in nurseries was given to the world by STARK BRO'S. The camera was brought to bear on the great fields of nursery trees, the fruit laden orchards, and the busy packing houses, bringing evidence surer and more convincing than all the descriptions that could ever be written. Hitherto the accounts of the STARK NURSERIES appearing in the papers from time to time had been solely recorded by the pen, and, consequently, denounced as exaggerated and highly colored. It was then that STARK BRO'S brought the camera to bear—and this is a WITNESS WHICH CANNOT EXAGGERATE, CANNOT LIE. The pictures made by the sun must show just exactly what comes before them. Being painted by Nature herself, they must necessarily be TRUE TO NATURE.

Stark Bro's court investigation—they have nothing to hide. No trade secrets to keep. Visitors are welcome in the offices, to the nurseries, propagating departments—everywhere. They have advertised for years inviting visitors to come, and making this challenge: If everything is not as represented, and, moreover, ahead of any competitor, they will give gratuitously, 1000 Whole Root trees, FREE of any charge.

Leading pomologists, horticulturists, and nurserymen of the U. S. and foreign countries, men most competent to judge, and hundreds of other visitors, come, see and go away pleased, most of them customers—and never yet one to claim the 1000 free trees. These personal visits, proofs, and facts, supply evidence that overthrows misrepresentations and conquers unjust, unfair competition.

Perhaps no one enterprise of this firm has received more attention than the STARK DENVER ORCHARDS; and yet the VERY EXISTENCE of these orchards has been denied, notwithstanding they have been PHOTOGRAPHED OR ILLUSTRATED by leading horticultural papers and the great dailies of Denver as well as in the U. S. DEPARTMENT OF AGRICULTURE REPORT, and VISITED BY THOUSANDS, including such scientists as Prof. L. R. Taft, of Mich. Exp. Station, U. S. Pomologist Van Deman, and others equally eminent. However,

Abuse Always Recoils upon the head of the abuser; the very worst wind sown is that which has for its purpose the extermination of a just, fair and square business. Right is always successful and truth is something which must prevail. Honorable business methods alone can build up and guarantee the permanency of any firm. Business men who abuse and misrepresent their competitors are sowing to the wind. It is only a matter of time when they will reap the whirlwind.

STARK BRO'S dare to do right as they see the right, regardless of what others may do or leave undone. Year by year they do a constantly increasing business. Many who sought to annihilate them, sowing the wind of abuse, long ago reaped the whirlwind.

